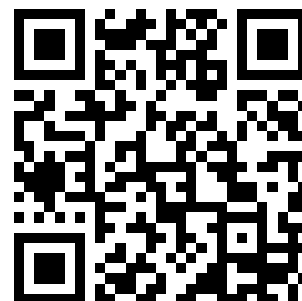
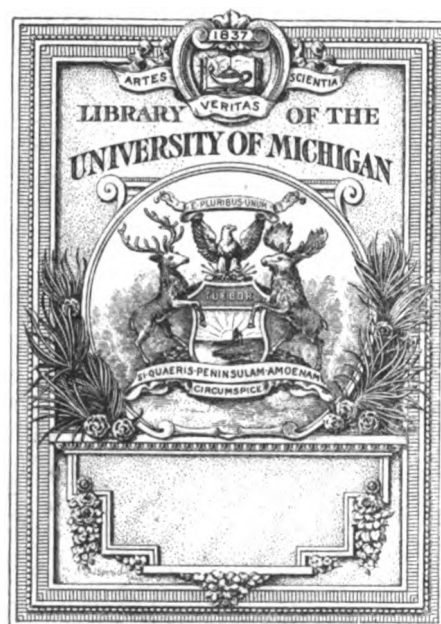

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VOL. XVI.

1896-7.

Published by
THE VICTORIA STREET SOCIETY FOR THE PROTECTION OF
ANIMALS FROM VIVISECTION,
UNITED WITH THE
INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF
VIVISECTION,
20, VICTORIA STREET, LONDON, S.W.

1903

The National Anti-Vivisection Society,

20, VICTORIA STREET, LONDON, S.W.

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Printed by MILLER, SON, & COMPY., LTD.,

FINSBURY CIRCUS BUILDINGS, LONDON, E.C.; AND FAKENHAM, NORFOLK.

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 1.]

LONDON, MAY 1, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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NOTES AND NOTICES.

THE arrangements for the meetings in celebration of the Society's twenty-first anniversary, on May 13th, are now completed. The afternoon assembly will be presided over by G. W. E. Russell, Esq., ex-Under Secretary of State, and the usual business of the annual meeting will be transacted. The evening meeting, a public one, will have Lord Coleridge as its president, and be addressed by Bishop Barry, Lord Ernest W. Hamilton, Mr. John E. Ellis, M.P., Mr. John F. Norris, Q.C. (late a Judge of the High Court, Calcutta), Mrs. Fenwick Miller, and Mrs. James Pender. It will therefore be seen that a most interesting celebration may be looked forward to with confidence, and we hope friends of the Cause will take part in larger numbers than ever.

OUR friends of the Ilfracombe Branch have just issued a new appeal inviting sympathy and co-operation, and give eight cogent reasons why their appeal should succeed.

SEVERAL friends of the Cause having called our attention to a most unfortunate pro-vivisection article

which appeared in *Goodwill* for February, it will be interesting to mention that a rejoinder on the anti-vivisection side, from the pen of Dr. Stanford Harris, appeared in the issue of that magazine for April.

IN the House of Commons, on March 27th, Mr. Leonard Courtney presented a petition from a public meeting of inhabitants of Dowerderry, presided over by Mr. Brian Williams, praying for the total prohibition of vivisection; and on the 31st Sir Michael Hicks Beach one from a public meeting of inhabitants of Clifton and Bristol, at the Blind Asylum Music Hall, Mr. Joseph Storrs Fry, chairman, with a similar prayer.

WE hear with pleasure, through Miss E. F. Evans, Superintendent of the Mercy Department of the British Women's Temperance Association, that at a meeting of the South and South-Western Women's Liberal Union, held at Bath on the 17th ult., a resolution strongly condemning vivisection was passed by a small majority. May the majority grow large.

MRS. ADLAM sends us a letter, written by a recent visitor to the Canary Islands, in which the cruelties to animals, described some months ago in the public journals, are proved to exist and to be very general. We trust the appeal which Mrs. Adlam makes for funds to offer prizes for the better treatment of animals in the Canaries may be liberally responded to.

THE memorial to the Home Secretary, printed, together with many of the principal signatures, in last month's *Zoophilist*, was personally presented on the 30th of March, and received by one of the principal officials. At present only a formal acknowledgment from the Permanent Under-secretary has been received. A notice of the memorial, with some of the leading names appended, was published in many of the London and provincial newspapers.

WE noticed with regret a paragraph in the *Daily News* of April 16th, stating that the Society's memorial to the Home Secretary was promoted by a recently formed society designed "to obtain some improvement in the working of the Act" in regard to vivisection. The memorial was, as is well known in anti-vivisection circles, organized by the Victoria Street and International Society as an interim step, pending the success of the agitation for the total prohibition of vivisection, which is still the object hoped and wrought for.

L'Eclair contained recently a very spirited appeal by

the well-known lady-journalist who writes under the name of *Séverine*, concerning Alfort. She addresses M. Zola with warm thanks for his beautiful article in the *Figaro* on *L'Amour des Bêtes*, and urges him (as English friends of our cause had already done, privately) to take up the question of the Alfort atrocities. She refers to the challenge in the *New York (Paris) Herald*, which had quoted at length, in French, our article of November 1st, (reproduced by Mdme. Séverine in the *Eclair*), with the remark of the Editor of the *Herald*, that he had written to the Director at Alfort to contradict our statements; but up to date *no reply had been received!* Madame Séverine pleads very eloquently, "If either the Healing Art or Science are to retain the respect of mankind they must not outrage that which is superior to them; namely, *Justice* to all, and sacred Pity. Let animals be killed if their death be necessary; but for God's sake, no torture!"

THE *New York Herald* (Paris) has returned to the charge in several issues, and we think it would hardly be possible for the Minister of Agriculture, M. Viger, whose attention has been twice called by the *Société Protectrice* to the Alfort cruelties and disobedience to regulations, to continue to remain passive, should he be restored to office.

WE rejoice to see that the sickening account of the horses left for food for leeches at the ponds of Loudon, Blanquefort, and Paremppeyre, near Bordeaux, seems to have rested, partially at least, on a misapprehension. Mr. Ward, English Consul at Bordeaux, writing to Mr. Harris, Consul at Nice, a letter published in the *Herald*, April 16th, describes the matter thus:—"When a supply of leeches is wanted, old horses are driven into the swamps and the suckers cling to their legs, when the horses are driven out again. It is possible that the horses are also driven in for feeding, but this I cannot find out with certainty."

THE following letter, addressed to Miss Cobbe by Mrs. William Grey, the life-long honoured advocate of the Higher Education of Women, will be regarded with interest and encouragement:—

41, Stanhope Gardens, Queen's Gate, S.W.

April 22nd, 1896.

MY DEAR FRANCES,—Though scarcely able to write, I must try and tell you what I think will interest you, and perhaps through you the general public, *apropos* of Dr. Buisson's cure for hydrophobia.

My dear old friend, the late Sir John Drummond Hay, who was so many years our Minister in Morocco, told me once, long before Pasteur's time, that the Arabs there cured hydrophobia by *sweating*. The patient was swathed in woollen covering till all but smothered, placed in a small tent (these tents are always of black camels' hair, much more impervious than canvas), the tent closed so as to exclude air as much as possible, and then left till the profuse perspiration had carried off the poison. Sir John's Arab informant told him that the cure was infallible. God grant that Buisson's system may explode that infernal Pasteur poison! . . .

God bless you!—Yours affectionately,

M. G. GREY.

WE have derived much entertainment from the perusal of an address by Dr. Bouchard, Professor of Clinical Medicine and Therapeutics at the Medical Faculty of Paris, reported in the *Medical Week* of March 20th. A good deal has been heard from time to time of the vast advances in medical knowledge due to vivisection.

It is therefore somewhat ludicrous to learn that medicine "is now striving to discover why and how a person falls ill," and that "it tries to make out how disease proceeds towards death or recovery." These surely are the very elements of the knowledge necessary to the treatment of human ailments, and as they have yet to be learnt apparently, what can vivisection, for instance, have done for medical knowledge? Can it only have incited the inquirers to begin at the wrong end?

WE have learnt with great regret, through the medium of a letter addressed to us by the Countess Biandrate-Morelli, that the Torinese Animal Protection Society has appointed as its president, in succession to the late justly-lamented Dr. Riboli, the Commendatore E. Roggeri, who favours vivisection. In a speech delivered on the 30th of May, 1889, Signor Roggeri said:—

"The binding down to the dissecting-board of a creature palpitating with all the fulness of vitality, thus depriving it of all possibility of motion or resistance, slowly piercing its most vital organs with the lacerating blade, and shred by shred laying bare every muscle, nerve and fibre, and trying to discover amidst this excruciating agony the functions and sources of life is doubtless a horrible spectacle. But if this cruel hand is lighted to its work by the lamp of science and the heart of the operator beats only for the good of the human race, the act ceases to be cruel and becomes providential."

With much more to the same effect, connecting vivisection in the end with the search for the True and the Beautiful! A more unfit man for the presidency of a society for the protection of animals could hardly be conceived, and steps are being taken to emphasize the feeling of the Society on this head.

PROFESSOR T. R. FRASER, F.R.S., has been for a long time experimenting on the effects of snake-bite on cats, rabbits and guinea-pigs. He claimed, in a lecture recently delivered at the Royal Institution, that such animals when inoculated with gradually increasing doses of snake-poison acquire complete immunity, and that their blood-serum ultimately becomes a powerful anti-venine which gives perfect protection against the fatal effects of snake-poison. The Professor also said that the anti-venine was equally efficacious when swallowed. Of course this discovery will be set down to experiments upon animals. But the lecturer added that he had read in the *Lancet* a communication from a doctor in South Africa describing the practice of snake-venom swallowing followed by Kaffirs, and stating that these natives appeared to be rarely affected by snake-bites. The fact is we owe an immense number of medical discoveries to savages, and if our doctors would but study the history of medicine they would learn far more than vivisection can teach them.

A Buisson Institute has now been opened at Upper Norwood, very near to the west end of the Crystal Palace, for the treatment of persons who have been bitten by dogs or other animals supposed to have been affected with rabies. The Buisson theory is simply that the sweating involved opens the pores of the skin, and all poisonous matter in the blood or in surface wounds is forced out through the pores. The medical charge of the Norwood establishment is under Dr. Haughton, who has made himself acquainted with the use of the Turkish bath in the east, and with the hot vapour bath, which as now practised contains, as a result of subsequent experience, a less amount of vapour than was employed in the days of the practical doctor of St. Fond. Patients sent by guardians from English infirmaries to the Pasteur

Institute in Paris have been in many cases (according to the *Standard*) allowed out of the rates as much as £40 for their expenses with very problematical advantages. At the Norwood Institute the patients are treated without fees, and are not, except under special circumstances, received as inmates; but if they have reason to remain for a course of treatment, they have to take lodging in the vicinity. To Mr. F. E. Pirkis, R.N., of Nutfield, Surrey, whose exertions to popularize this harmless and effective treatment have been strenuous and long-sustained, is due much of the credit of the foundation of the Buisson Institute. The funds, we believe, are supplied by a benefactress who desires to remain anonymous.

WE confess to being amused—though the subject is serious enough—with the purblind inconsistency of Dr. Andrew Wilson, who furnishes the "Science Jottings" from week to week in the pages of the *Illustrated News*. In the issue for April 11th he took up the subject lately dealt with in several publications, of "the brutality exercised on animals, and on dogs especially, which are trained to perform various tricks and antics" in theatres, circuses, and elsewhere. After this display of indignation—for we have quoted his own words—he went on to say:—

"Personally, I can find a justification for scientific experimentation on an animal when such experiments have for their aim the saving of human life from disease-attack. Even the most determined opponent of vivisection will hardly compare the brutality described in Mr. Bensusan's article with the experimentation of the physiologist conducted under anæsthetic influence. But scientist and non-scientist will agree cordially, I apprehend, that the state of matters elicited by Mr. Bensusan's inquiries must not be allowed to continue."

How easy it is to compound for sins we are inclined to by damning those we have no mind to! Our readers will not fail to observe the adroit attempt to shield the cruelties of vivisection by the introduction of the words "under anæsthetic influence," when Dr. Wilson must know that large numbers of experiments on animals are made without any pretence first to induce anæsthesia.

BEFORE Mr. Lecky became, or was training to become, a politician, he wrote much in his books, the tendency of which was, to say the least, in favour of humanity to animals. But in his recent work on "Democracy and Liberty" he has aimed a distinct blow at anti-vivisectionists, in the following passage:—

"We have had a melancholy example of this (women's fanaticism) in the attitude of late years of a large class of educated Englishwomen on the subject of vivisection. . . . What tyrant could inflict a greater curse upon his kind than deliberately to shut it out from the best chance of preventing, alleviating, or curing masses of human suffering, the magnitude and poignancy of which it is impossible for any imagination adequately to conceive? What folly could be greater than to do this in a country where experiments on animals are so guarded and limited by law that they undoubtedly inflict far less suffering in the space of a year, than field sports in the space of a day?"

As our contemporary, the *Presbyterian*, asks, so ask we—Does Mr. Lecky not know that many of our leading physicians are opposed to vivisection as *not* offering any chance—let alone the best—of "preventing, alleviating, or curing" suffering humanity? Is he not aware that the alleged benefits of vivisection to humanity have all been denied on competent scientific authority?

In another column we print an article dealing with the statements of the report of the medical superintendents

of the Metropolitan Asylums Board on the results of a year's use of anti-toxin in their hospitals. In connection with the same subject—the merits of anti-toxin as a remedy for diphtheria—we learn from the April issue of the *Practitioner* (page 435), through Professor Soerensen, of Copenhagen, "that the serum did not to any appreciable degree prevent the extension of the disease to the larynx; all the severe cases died, and the good result in the slighter ones was attributable to the mild type of the epidemic."

THE most serious incident of the month, however, in regard to the use of anti-toxin for diphtheria is the poisoning of the son of Dr. Langerhans, of Berlin, by his father, with an injection of serum. The child, a boy, aged one year and three-quarters, was injected with the serum as a precautionary measure, a maid-servant having been sent to hospital with symptoms of diphtheria. The statement in the *Times*, under date of April 12th, was to the effect that "a few minutes after the operation, which the unfortunate father himself performed, the child, who was before in blooming health, was dead." "Dr. Langerhans himself," the *Times* correspondent adds, "is apparently of opinion that the anti-toxin was the immediate cause of death."

THE "New Priesthood" has received a very salutary and much-needed lesson in the emphatic verdict for the plaintiff returned by the jury in the case of *Kitson v. Playfair*. The assumption of superior professional virtue could not blind the eyes of judge or jury to the common-sense view of the facts; and whatever may be the result of Dr. Playfair's appeal, it is certain that a most damaging blow has been struck at the *prestige* of the Royal College of Physicians. As Dr. De'Ath foreshadowed in his address at Guy's Hospital, that august body bids fair to earn for itself the title of "Royal College of Pecksniffs," with its puerile rules of etiquette, and its lofty pretensions, which those who are the loudest in making are the last to live up to. "The medical profession," said Mr. Justice Hawkins, "might discuss among themselves the rules they made for their own guidance, but they had not the power to impose those rules upon the public." It is to be hoped that in the future the much-enduring public will know how to act when the profession coolly demands, as it usually does, to be judge, jury, and witnesses as well, when any question relating to the profession comes up for discussion.

THE one journal among the medical weeklies which takes an adequate view of the situation is the *Medical Press and Circular*. In its issue of April 1st, in a leading article on "The Plea of Privilege," it brings out another aspect of the case, which shows how little so-called expert medical evidence can be relied on when professional interests—real or imaginary—are at stake. It says:—

"And lastly, the attitude of the judge and the verdict of the jury prove how dangerous it may be to multiply weak medical evidence in a court of law, evidence that, no matter how distinguished the source from which it is derived, serves only to prove to the court and the public that medical men, even when the position is clearly a weak one, will, as is popularly said, 'hang together.' Never was this made more manifest than in the trial of *Kitson versus Playfair*."

ANOTHER shock is in store for the sensibilities of those who have plumed themselves on the infallibility of the

New Priesthood. For forty years the affairs of the profession have been administered by the General Medical Council appointed to administer the Medical Act, and this Court has practically exercised despotic sway over the profession. So much has this been the case that the "Court Medical" has come to be regarded as something separate from the ordinary tribunals and independent of ordinary laws. But the Court Medical, after exercising discipline over individual members, has at last attempted to put its foot on one of the licensing corporations, to wit, the Apothecaries' Hall of Ireland. This Association, having means at its disposal, has appealed to the Privy Council. Here is a noteworthy object lesson that must open the eyes of many to the real state of matters. The Court Medical is not the ultimate court of appeal, and the *Lancet* may well feel nervous about the result. It says in its issue of April 18th:—

"The General Medical Council is a domestic court to secure the efficacy and reputation of the medical profession, partly through its corporations and other qualifying bodies, and partly directly. Its powers are considerable, the more so as they are undefined. All who have the interest of the profession at heart will agree that the best thing for the profession is to have all questions arising under the Medical Acts settled in the General Medical Council. . . . Those who think otherwise, and who consider that some modification of its constitution is needed, may well stay to consider the minimum of change required lest they compromise fatally the domesticity of the government of the profession."

SOME ghastly experiments are reported from Vienna (*Lancet*, March 26th—Vienna Letter). They consisted in cutting across the medulla oblongata and taking out the spinal cords of animals, into which extract of the supra-renal glands was injected:—

"After section of the medulla and extirpation of the spinal cord Dr. Biedl has succeeded, by injection of supra-renal extract, in producing a blood pressure amounting to 160 mm. (= 6.3 inches) of mercury, and in prolonging the life of the animal, which would otherwise quickly succumb. In order to illustrate the importance of this fact he referred to the experiments of Stricker, who in 1877 proved that extirpation of both the cervical and thoracic parts of the spinal cord causes instantaneous stoppage of the heart's action. Death is due to anæmia of the heart, the vessels losing their tonicity and the blood being collected in the fully relaxed veins, so that the animal may be said to bleed to death into its own vessels. When the vagi are cut the strength and frequency of the contractions of the ventricle are augmented, and more blood flows through the arteries, producing a rise in the pressure to four or five times its original amount."

PROFESSOR STIRLING, of Owens College, Manchester, has recently paid a visit to the physiological laboratories of Paris, and reports thereon in the *British Medical Journal* of April 11th. Referring to Professor Charles Richet's class-rooms, he says:—

"As the amphitheatre is used by several professors one cannot make many experimental demonstrations. This defect—if such it be regarded—is supplemented in two ways. The professor gives three or four demonstrations of classical experiments in experimental physiology during the term. Besides this M. Laborde gives demonstrations on physiology."

HERE is another item from the same article which signally illustrates the callousness of the experimenter. Nor has Dr. Stirling (though he does question the necessity of demonstrating experiments) a word of protest against this piece of absolutely wanton cruelty—the repetition of "classical" experiments. For a

"classical" experiment is one that is perfectly understood and therefore unnecessary from any point of view:—

"Teachers of physiology have occasion to show Cl. Bernard's classical experiment on the effects produced by section of the cervical sympathetic. Ranvier compresses the central artery firmly against the cartilage of the ear with the thumb nail placed transversely across it, whereby the several nerves accompanying the artery are divided, and vaso-dilatation occurs at once above the area of compression. The nerves of the vein alone may be divided with a similar result. This is a simple experiment enabling one to show the existence of vasomotor nerves for veins as well as for arteries."

Dr. C. F. MARSHALL (late anæsthetist to the Hospital for sick children, Great Ormond Street), states, says the *Medical Annual* for 1896, that "Chloroform has a depressing effect on the heart is a clinical fact, whatever the results of the Hyderabad experiments [on dogs] may attempt to prove."

PROF. A. H. HARE, M.D., writing the Therapeutic Review for the past year in *The Medical Annual*, says (p. 8.), he "believes that all cases of diphtheria which take chlorate of potassium internally may be divided into the two classes: first, those which get well by lucky accident; and secondly, those which die quite as much from their physician as from their disease." Cannot even this be settled in the physiological laboratory?

Dr. ALEXANDER MORISON in a paper published in the *British Medical Journal*, March 14th, 1896, on "the Treatment of Aortic Valvular Disease" says:—

"From the days of Stephen Hales until now, the relations between artery and manometer have not been such as obtain in nature, and the argument from quadrupeds to man as to the power of the heart and pressure in the blood vessels are fallacious, for those physical reasons which bring about a difference in the circulatory apparatus of animals habitually and respectively horizontal and erect."

THE Rev. Stephen Hales was the vivisectioning clergyman who in 1727 inserted a long glass tube into the femoral artery of a horse, of course in those days without any anæsthetic, to calculate the force of the heart. The point is not settled yet, nor as Dr. Morison says is it likely to be by any such method of investigation. Neither has Dr. Morison any higher opinion of the value of experiments on animals in other questions of the circulation. He goes on to say that "all experimental study of the influence of respiration upon the circulation of the blood is open to the same objections of artificiality as direct investigations of blood pressure." What contradictory results do we not find in the experiments of vivisectioners in questions of the blood pressure! Marey and Chauveau demonstrated by experiment on the horse that destruction of the aortic sigmoid valves caused a rise in the blood pressure. Ottomar Rosenbach on the contrary showed that no artificial destruction of valves, or even the introduction into the heart of various obstacles, materially affected the blood pressure in the arteries. And this is the "science" on which our budding physicians are being nurtured.

THE *British Medical Journal*, of March 14th, contains this item of medical news:—

"HYDROPHOBIA IN PORTUGAL.—The *Coimbra Médica* states that three persons recently died of hydrophobia in Coimbra in the course of one week. Two of them had undergone a course of anti-rabic treatment."

OUR CAUSE IN PARLIAMENT.

DISSECTIONS BY YOUNG GIRLS IN BOARD SCHOOLS.

In the House of Commons on Monday, March 30th, COLONEL LOCKWOOD asked the Vice-President of the Committee of Council on Education whether he had become acquainted with the purport of statements lately published in Birmingham to the effect that a class of young girls at the Waverley Road Board Schools were made to dissect the bodies of rabbits; were these operations enjoined by the Government Inspector; if so, were they sanctioned by the Department as a necessary part of the education of girls; was the kind of teaching involved to be continued; and would he see that the use of diagrams as illustrations should be substituted for such experiments.

SIR J. GORST (Cambridge University)—The dissection in question was performed by some sixteen girls, not in an elementary school, but in the advanced course of the organized science school. Physiology is a compulsory subject in this course, and the regulations of the Science and Art Department require a practical acquaintance, by the use of a microscope, with the minute structure of the several tissues and organs. None of the girls were under fourteen, and nearly all were over fifteen. The clerk to the Birmingham School Board says that the actual dissection was nothing more than any girl would necessarily perform in preparing a rabbit for stewing (laughter), and has probably been done without remark in most cookery kitchens.

[That may be so, but it is quite a new phase of British Education that in order to suit the fad of the Science and Art Department for teaching physiology, young girls should be habituated to handling and closely observing the mutilated bodies even of animals recently killed.—ED. Z.]

MISS COBBE AND THE TEACHING OF PHYSIOLOGY TO YOUNG GIRLS.

In connection with the recent exposure of how physiology is taught to young girls in a High Grade Board School in Birmingham, a correspondence ensued in the *Daily News*, in the course of which the following letters from Miss Cobbe were published:—

I.

SIR,—Two centuries ago Molière made his typical medical student of the period offer a young lady, whose affections he desired to engage, the graceful present of a ticket to view a dissection. Are we destined to lose those old notions of feminine delicacy which made the proposal of Thomas Diaforius so exquisitely ridiculous in his generation? A few nights ago Colonel Lockwood asked the Vice-President of the Committee of Council on Education "whether he had become acquainted with the purport of statements lately published in Birmingham to the effect that a class of young girls at the Waverley Road Board Schools were made to dissect the bodies of rabbits; were these operations enjoined by the Government Inspector; if so, were they sanctioned by the Department as a necessary part of the education of girls; was the kind of teaching involved to be continued; and would he see that the use of diagrams as illustrations should be substituted for such experiments." Sir John Gorst replied thus:—"The dissection in question was performed by some sixteen girls not in an elementary school, but in the advanced course of the organized Science School. Physiology is a compulsory subject in this course, and the regulations of the Science and Art Department require the practical acquaintance, by the use of a microscope, with the minute structure of the several tissues and organs. None of the girls were under fourteen, and nearly all were over fifteen. The Clerk to the Birmingham School Board says that the actual dissection was nothing more than any girl would necessarily perform in preparing a rabbit for stewing, and has probably been done without remark in most cookery kitchens." This reply was received, it is reported, with "loud laughter." Permit me, Sir, as a woman who for the last half century has pleaded for the "Higher Education of Women," to express

my alarm at finding that the present Minister of Education in England thus deliberately sanctions a system which ought to be described as emphatically the Lower Education of Women, namely, that which is best suited to deprive them of womanliness. Whether the cackling legislators who applauded Sir John Gorst are seriously of opinion that the ratepayers of Birmingham and elsewhere may fairly be taxed that Board School girls may learn to dissect rabbits with scalpels and bloody fingers concerns me little; but I wish to lay before your readers for their serious consideration a much larger question which the incident suggests: Is physiology a science which ought to be taught to schoolboys or schoolgirls at all? I crave for a little space to state certain reasons why we should hesitate before answering this inquiry off-hand in the affirmative. I do so with the more confidence because, having submitted my views to many of the most eminent schoolmasters in England, I received from several of them (notably from the late Mr. Thring, of Uppingham, and others at the head of some of the greatest public schools) the assurances of their entire agreement therewith.

First, there is the general objection to scientific as contrasted with literary training, the latter alone claiming justly to "soften manners," while the mental limitations consequent on devotion to physical science (well defined by Herbert Spencer in his "Sociology") and the hardness and arrogance witnessed in these latter days amongst its votaries, provoke the contrast between the old *Literæ Humaniores* and the new *Scientiæ Inhumaniores*. But admitting that in these days science of some sort must necessarily form a part of the education of both boys and girls, why, I ask, is Physiology of all the circle the oftenest chosen, and the one on which most stress is laid? Are not other sciences far better suited for mental training? If no physical science can suggest the same moral ideas, or present the same examples, or stir the moral pulses as history and poetry do at every page, at least there are some which greatly lift up and enlarge the mind—as, for example, by the contemplation of the stupendous magnitude and order of the material universe taught by Astronomy, or which solemnise it by the retrospection into the dim vistas of geologic epochs, or entrance it by the beauty exhibited in the objects of Botany and Zoology, or illuminate it by the marvellous revelations of modern Physics and Chemistry. All these sciences may justly claim to possess, as methods of education, suitabilities to affect in a desirable direction the minds subjected to their influence. What, I ask again, are the claims of Physiology to be set against these? Nay, but has it not dangers all its own which may well cause a prudent teacher to fear to excite the illomened inquisitiveness of immature minds "between fourteen and sixteen," as Sir John Gorst precisely indicates? This matter cannot here be discussed, but there are very grave reasons for believing that Physiology is not the first science which ought to be taught to the young and impressionable, but the very last wherewith the calm temperament and trained intellect of middle life may safely complete its circle. Of course it is possible to teach and to learn Physiology in a high and pure and religious spirit. But it is certainly more liable than any other science to be studied in an opposite one. It cannot be doubted that it has a distinct tendency to materialise the minds which pursue it; to make the physical analogue of every human feeling always the prominent idea rather than the spiritual fact of which the physical is the accompaniment. The example of the medical students who alone have undergone hitherto the coarsening influence of such studies ought surely to be a warning not to be lightly disregarded.

Beyond the question of the propriety of teaching Physiology to boys and girls in any manner, comes that of teaching it in the manner now exhibited at Birmingham, by the dissection of just-killed animals. On this point I should earnestly plead for the cultivation of girls' hearts rather than for the instruction of their brains, at the cost of forcibly overcoming their natural (and laudable) reluctance to handle the bleeding entrails of a creature slaughtered that moment for their particular improvement. Those were weighty words of good old Samuel Johnson: "He buys knowledge too dear who learns the use of the lacteals at the expense of his own humanity!" The London School Board, I rejoice to hear, has just adopted the admirable series of "Animal Life Readers," edited by Miss

Edith Carrington and Mr. Ernest Bell; an example which we shall doubtless see followed by other School Boards all over the country. But it is a farce to teach humanity to children if, at the same time, they are set to practical tasks, specially calculated to harden and brutalise them. It is my sorrowful conviction that the introduction of these dissections and the new teaching, generally, of Physiology in schools, is part of the large aim of a certain powerful party to familiarise the public mind with the idea of vivisection, to inspire interest in the results of such "research," and to transform natural horror of cruelty into the morbid fascination which the sight of blood and mutilation manifestly possesses for their unhappy selves.—I am, Sir, yours truly,

Hengwrt, Dolgelley.

FRANCES POWER COBBE.

II.

Sir,—Your correspondent, Mrs. Clare Jerrold, who protests against my recent letter in your columns, labours, I venture to think, under some confusion of ideas. She seems, in the first instance, to forget that physiological knowledge which might possibly save mothers from either dying in childbirth or causing the deaths of their infants by unwise treatment, is not possibly communicable by class lessons to girls of fourteen and fifteen at a Board school. At least I devoutly hope that we are yet unprepared to see lectures on obstetrics and gynaecology thus delivered by Board school masters or mistresses. Secondly, Mrs. Jerrold assumes that physiological lore would save many a young girl "from being ruined by an unscrupulous man." Again I fail to apprehend how such knowledge could, with the slightest regard for common decency, be communicated to girls in a public school, instead of by their mothers in their private chambers. And further, I am convinced that all the physiology in the world would be of small avail as a protection, unless backed by moral principles, and by the very modesty and delicacy which all this school instruction seems intended to break down. "When lovely woman stoops to folly," it is not physiology, but piety, purity, and a sense of duty which are her safeguards.

Lastly, Mrs. Jerrold ingeniously assumes that we have only to teach girls scientific physiology, and they will evermore pay practical attention to all the hygienic rules which the science indicates. Let us take an example—one of the very plainest—and see how far this will carry us. For at least sixty years, as my memory goes back, the attention of young women of all ranks has been called to sundry familiar diagrams exhibiting the female ribs as they ought to be, and the female ribs as they become when crushed by tight lacing, with inner glimpses of the unhappy heart, stomach, etc., compressed out of shape, and having their physiological functions manifestly impeded in the most alarming manner conceivable. Yet when I look at the waists of the young women in the drawing-room or the streets, or even issuing from the schools (not to speak of the monsters depicted in the fashion plates) in 1896 I find that all these wise lessons have been absolutely thrown away. The wasp is still, physiology notwithstanding, the type to which feminine beauty aspires, and it is also the one which the masculine mind (which knows quite well the deadly and disagreeable mischief it involves) persistently admires. This last failure of the physiological instruction in a case which should (if Mrs. Jerrold were right) have been its easiest triumph is the more noteworthy because the lesson has been enforced precisely in the manner most favoured by the advocates of science. A poor little monkey was a few years ago encased in a tight fitting plaster of Paris corset, and left to endure the miseries of that condition for a long time, probably till released by death, all to give an object lesson to silly women on the evils of tight lacing. But the vicarious martyr of fashion and science died quite uselessly as usual. I quote the following from an article by Dr. Alfred Leffingwell in the *Boston Journal of Education*. After deprecating teaching physiology in common schools by dissection of just killed animals (precisely as it is done in the Birmingham Board school), he says:—

" 'Danger!' I can fancy the surprise, mixed with incredulity, with which a young science teacher repeats the word. 'What danger can there possibly be in the killing and immediate dissection before my pupils of any living creature? I do not vivisect animals, but only dissect them.' Permit an old teacher to tell you of this danger about which you are sceptical. Among men of science the study of the mental and physical peculiarities of young children has excited during recent years

no little interest. It has been discovered that if we take the pupils of any large public school and study them carefully as individuals—physically, mentally, and morally—we shall find in each class a certain proportion below the normal standard. The difference in moral sensibility among the young is found to be equally well marked. No two pupils have precisely the same repugnance to wrong-doing in any direction, or manifest the same sense of honour and love of truth, the same hatred of cruelty, or the same tendency to sympathy. Just as a certain proportion of children are below the average in physical development or mental capacity, so, too, a definite proportion are imperfectly developed morally; and in many cases need but slight excitement to have aroused within them impulses to cruelty, vice, and crime. They are 'psychopaths'—a term which Professor James, of Harvard University, employs to denote an inborn aptitude to immoral actions in any direction. This aptitude may not be always awakened; doubtless in many cases, by education and continual normal environment, it is gradually outgrown; but if it be once fairly aroused, so that a sense of gratification is incited by wrong doing, there are no excesses of cruelty and crime to which these psychopathic children—these moral imbeciles—may not go. And, curiously enough, it is very often in the direction of cruelty—the infliction of pain—that the first incitement is directed. Now, before a class of pupils in a public school, suppose you illustrate the lesson by dissection of a rabbit or a cat, killed at that time and for that purpose. It is possible that the majority of students might have their attention fixed only upon the facts of anatomy thus illustrated. But to some others—children quite as likely as otherwise to have been most carefully trained and to be the objects of most tender solicitude—there will come slowly creeping into consciousness a vague, abnormal, horrible sense of satisfaction at the sight of this quivering flesh, yet ruddy with the warm blood of out-gone life. Which are the pupils that experience this arousing emotion? Will they confess it to you? Certainly not. The beauty, the grace, the excellence of all harmless living things is the lesson for children, rather than precocious intimacy with the mystery of death. Dangerous and unnecessary. These are the words which, in the august name of science herself, may we not stamp upon all methods of instruction in our public schools which make for the brutalisation of childhood by inducing early familiarity with the sacrifice of life?"

I am, Sir, truly yours,

Hengwrt, Dolgelley.

FRANCES POWER COBBE.

CORRESPONDENCE.

PASTEUR PATIENTS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—It is still the usual practice for men who have been bitten by dogs supposed to be mad to go to Paris to be put through the Pasteur treatment, though grave charges of inefficacy and danger have been brought against this mode. Timid persons must take comfort from the fact that most of the ^{so-called} suspected of being rabid are in reality only afflicted with fits, either epileptic or convulsive, sometimes only morose or ill-tempered, because of some ill-usage, excitement, or some other cases of that sort. There are indeed lots of ills that dogs are subjected to that have no connection with rabies, yet the minute a dog shows something unusual they kill him directly, once the "mad dog" scare has been raised. The case is reported as a terrible one of "mad dog" in the papers, and it goes all over the country and creates excitement when there is no occasion for it. Not one case in twenty will hold water. Professor Murdoch Cameron, a good authority on the subject of rabies, avows that in twenty-five years he has not met with a single genuine case of hydrophobia. Dr. G. Whitfield writes in the new April number of the *Free Review*: "It is very probable that by Pasteur's inoculations of the diluted virus, hydrophobia is sometimes produced in men in those cases where no absolute proof could be obtained that the dog suffered from rabies. A source of error is that all the cases in which hydrophobia would never have developed without inoculation at the Pasteur Institute, are reported as cured to the credit of the system of inoculation, while, in fact, they are no proof for its efficacy."

As I am of the opinion that hydrophobia may be prevented, and even cured, by the proper use of the vapour bath, a view held by many competent judges, I welcome the establishment of a Buisson Institute in London as a very sensible experiment, and hope that success will crown the enterprise.

Faithfully yours,

JOSEPH COLLINSON.

Humanitarian League, 79A, Great Queen Street, W.C.

OUR CAUSE IN THE PRESS. THE R.C. CHURCH AND ANIMALS.

(FROM THE "ECHO," APRIL 6th.)

SIR,—The *Catholic Times* of this day publishes the following item of news from its Paris correspondent:—"M. Emile Zola has, in the decline of life, discovered a growing sympathy and affection for all four-legged creatures. The sentiment is far from being a bad one, but it is often characteristic of a certain downward movement of a kind that has done with all its ideals and all noble sympathy with humanity." So much of this sentence as is not pure nonsense is false in suggestion if not in fact. One could say, "The religious sentiment," for example, "is far from being a bad one, but it is often characteristic of a cruel and base mind." Or we could say, "Orthodoxy is far from being a bad attitude of mind, but it is often combined with brigandage and moonlighting." What the writer means is that one may be an animal lover yet a Nero or a Tiberius. Of course one may! Not every facet of a man's nature is utterly marred and impervious to good, but the sentiment of the writer is a stupid platitude worthy only of a religious newspaper or a pulpit. Now for the class of mind which, "having done with all noble sympathy with humanity," turns its affections towards the animals. St. Anthony was fond of wild creatures, and is the patron of the Roman cattle, I believe, now. As he went into the desert to live, we may admit he had done with some, at least, of his "noble sympathy with humanity," and we will make the *Catholic Times* a present of good St. Anthony. But we can't give up St. Francis; he loved his dear brothers and sisters, the birds and the beasts; and even the Jesuits will not say he was deficient in "noble sympathy with humanity." To come to our own times, what of the leaders of the anti-vivisection movement, whom I have known, and with whom I have had the honour to work? What of Lord Shaftesbury, the late Lord Coleridge, Cardinal Manning, Lord and Lady Mount Temple, and Miss Cobbe? Plenty of "noble sympathy with humanity" there, surely! What of Lord Tennyson and Robert Browning? Had they lost their ideals before they took up with our movement? Has Mr. Passmore Edwards lost either his "noble sympathy" or his "highest ideals"? I do not know, Sir, which disgusts me most in this "Paris Correspondent's" mingled sneer at the cause of the animals and hatred of M. Zola, its ignorance or its spite.—I am, Sir, yours, &c.,

April 2.

EDWARD BERDOE, M.R.C.S.

RABIES, SCIENCE, AND DISCUSSION.

(FROM THE "SURREY MIRROR," APRIL 2ND.)

SIR,—Your correspondent, "Medical Contributor," is I venture to think, very much behind the times in seeking to shut the door on the discussion of scientific and medical questions. Publicity is the very life of science, and as the duration of the bulk of scientific truths, as they are called, is only a few years—after which they are improved or disproved—it will be seen that discussion is absolutely necessary to prevent them becoming antiquated and being relied on when they are obsolete. In regard to medical questions, the same thing is constantly going on among the experts, and, if the current evidence is to be relied on, with much the same result as in the scientific world. The only difference between the two is that general science does seem to make some progress, while medicine hardly does. The current evidence I have just referred to is before me in the shape of an extract from a paper by Professor Bouchard, of the Medical Faculty of Paris, and published in the *Medical Week* of March 20th. He said of medicine that "It is now striving to discover why and how a person falls ill, in what manner the cause affects the organism, and by what means the latter reacts against it; it endeavours to discover the connection between successive morbid acts and the influence which they exert on the primary cause and the series of secondary causes resulting from already existing disturbances and lesions; it tries to make out how disease proceeds towards death or recovery." So far, then, from there being, as your correspondent would have us believe, an "exact foundation of science upon which modern medicine is based" some, at least, of the leaders of the profession seem to be standing still at the threshold of knowledge, groping for light.

But, sir, the question of Pasteur's treatment for hydrophobia was not a medical question in its inception, although it might have been ascribed to scientific inquiry—some of it of a very objectionable kind. The late M. Pasteur was a chemist, and was not trained to the profession or practice of medicine at all. His successor at the head of the Institute in Paris is likewise a chemist, and not a doctor. Therefore, in supporting the Pasteurian system your correspondent is not supporting anything which, at the outset, was a discovery due to the medical profession. Pasteur was an outsider—a layman—hence, his claim must be deemed to be open to discussion by laymen.

Your correspondent finds fault with Mr. Pirkis for questioning the madness of the dog that bit the boy at Redhill, and he does so mainly because the so-called scientific tests are said to have proved the dog to have been mad. But the theory on which the tests of the Institute and the Veterinary College proceeded was the Pasteurian theory, and it has yet to be proved that that theory is trustworthy. Pasteur, when he failed to convey rabies by the means through which it is ordinarily transmitted, namely, the saliva, then claimed to have discovered that the virus resided after the death of a rabid animal in the spinal cord. But it is a claim and no more. Your correspondent says, no doubt, "It has been proved that if immediately after the animal is infected, it is put through a course of preventive treatment, it does not become rabid, and this is the invariable result of the experiment." Von Frisch, who was friendly to Pasteur, proved and testified that the Pasteurian treatment might be protective against artificially induced rabies, but not against that ensuing upon the bite of a mad street dog, which is the kind of bite from which human beings mostly suffer. And as to the treatment being invariably preventive, how is it, if that be so, that 285 persons are now known to have died after having been preventively inoculated according to the Pasteurian method? Has not Dr. Dolan, of Halifax, probably the greatest living English authority on hydrophobia, said "The deaths after this preventive inoculation are the saddest corollaries we could have on the falseness of the basis on which his (Pasteur's) prophylactic rested?" And has not the late Dr. Vincent Richards, by no means an anti-vivisectionist, written "M. Pasteur's method of treatment, so far as the world has been enlightened, rests on no firmer basis than that which justified the vaunted powers of Holloway's Pills and Mother Seigel's Soothing Syrup?"—I am, etc.

BENJN. BRYAN,

Secretary Society for the Protection of
Animals from Vivisection.

20, Victoria-street, London,

March 31st, 1896.

A DEMOCRATIC PROTEST AGAINST VIVISECTION.

THE following protest against the practice of vivisection has recently been signed:—

"We, the undersigned, believing that the practice of vivisection is cruel and inhuman, and that all such experimentation on living animals is opposed to the right feelings and true interests of the working classes, do hereby express ourselves as in favour of the entire prohibition of vivisection, by the enactment of a measure to amend the Cruelty to Animals Act of 1876. Martin Anderson ("Cynicus"), Thomas Blandford, Harriot Stanton Blach; Robert Blachford (Editor, *The Clarion*), Mrs. Bramwell Booth, Edward Burgess (Editor, *Daylight*), John Burns, M.P., L.C.C., Herbert Burrows, Thomas Burt, M.P., Mona Caird, Edward Carpenter, Walter Crane, Wm. Crooks, L.C.C., Pete Curran, Michael Davitt, M.P., Joseph Edwards (Editor, *Labour Annual*), Elizabeth Wolstenholme Elmy, G. W. Foote (President, Secular Society), Isabella O. Ford, J. Bruce Glasier, Katherine Bruce Glasier, Fred Hammill, J. Keir Hardie (Editor, *Labour Leader*), H. W. Hobart, G. J. Holyoake, (Rev.) H. Price Hughes, Leslie M. Johnson (Editor, *Seamen's Chronicle*), J. H. Levy, Tom Mann, Caroline E. Derecourt Martyn, Margaret McMillan, William Parnell, Hodgson Pratt, H. Quelch (Editor, *Justice*), Howard C. Rowe, George A. H. Samuel, George Bernard Shaw, Frank Smith, May Morris Sparling, Enid Stacy, W. Thorne, for National Union of Gas-workers, John Trevor (Editor, *Labour Prophet*), Henry Vivian, J. Bruce Wallace.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, FRIDAY, MAY 1st, 1896.

MYXŒDEMA AND THE THYROID "CURE."

WHEN the apologists of Vivisection are challenged to prove that any disease to which the human body is subject has been definitely and effectually cured in consequence of knowledge gained by experiments on animals, they uniformly adduce the distressing and fatal malady termed myxœdema, which they declare is now curable in consequence of the experiments of Mr. VICTOR HORSLEY and others. Although we have frequently pointed out how misleading and deceptive this contention is, we propose to refresh the minds of our readers on a subject which is at once extremely interesting and instructive for the students of our side of the Vivisection question. Myxœdema is the name given by Dr. WILLIAM ORD to "a progressive disease, in which the tissues of the body are invaded by a jelly-like mucus—yielding dropsy, unaccompanied by albuminuria or other signs of primary affection of the kidneys." If we turn to Dr. ORD's article on the subject in "Quain's Dictionary of Medicine," first edition, published in 1883, we find that it was observed that a noteworthy phenomenon was met with in the external examination of the persons suffering from this disease—a diminution, sometimes almost a disappearance, of the organ known as the thyroid body or gland, which is a firm vascular substance situated on the sides and front of the upper part of the windpipe. It is remarkable that so short a time back as 1888 the great work on physiology by LANDOIS and STIRLING states that "the functions of the thyroid gland are very obscure. Perhaps it may be an apparatus for regulating the blood-supply to the head." Sir CHARLES BELL supposed that it was designed to prevent the vibrations of sound originating in the larynx from being propagated downwards.

It is the seat of bronchocele or goitre, a disease which is sometimes, but not invariably, associated with idiocy and cretinism. Goitre, or enlargement of the thyroid gland, is common among populations whose food, air, water, or general surroundings are unsuitable or defective. Dr. CREIGHTON, writing in 1885, said that the thyroid gland enlarges because the organ having greater calls upon its ordinary function, makes an effort to meet

the circumstances of the case. Apart from the deformity, goitre is harmless. In Switzerland, where the disease is common, surgeons have practised removal of the gland which had become enlarged under the belief that as it was an useless structure it could do no harm to take it away and thus possibly cure the patient. As the operations were performed in hospitals, the after effects of them were carefully observed. In eighteen cases of complete removal of the thyroid in the hospital at Berne, the condition known as myxœdema followed in sixteen instances. The dropsy of the skin, the progressive dulness, and other symptoms of impaired function soon became manifest, and death supervened in a few years. It was also remarked that in cases where myxœdema appeared without any operative interference, the thyroid gland was either very small or altogether absent. Here then the relation between myxœdema of an idiopathic character, and that following operative removal of a goitre was clearly manifest. To any one possessing an acute power of reasoning on pathology, it must have appeared certain that the so-called useless thyroid gland had not been placed in men or animals purposelessly. It should have been clear to the scientific observer that the gland fulfilled a highly important office in the nutrition of the body. Given bad hygienic conditions, the thyroid enlarges to compensate for them; remove the thyroid and the patient wastes away and ultimately dies. It must not be forgotten that Dr. KING, in 1836, had made some researches, in which he discovered that the thyroid secretes a peculiar fluid which finds entrance to the general system through the lymphatics. Afterwards CREDE, RESAS, ALBERONI, and others, made further researches in the same direction.

Now we come to the so-called "discoveries" of Mr. HORSLEY. Text-books of physiology say that "HORSLEY finds that the removal [*i.e.* of the thyroid gland] is the essential cause of myxœdema and cretinism." HORSLEY forsooth, and not the surgeons at the Berne hospital who removed the goitres from their patients, and noted their subsequent illness and death. There was enough done at Berne hospital to save Mr. HORSLEY all his labour and his victims in his laboratory all their tortures. He took out the thyroid from a donkey, and the animal died in two hundred and five days in a miserable condition from emaciation and weakness; the animal was unable to stand, tremors and twitching supervened with paralysis, and the body temperature became markedly lowered. Sheep, pigs, and monkeys were also experimented upon in a similar manner. SCHIFF used fifty-two dogs for the same purpose, and many other cruel experiments were performed on animals merely to prove that the CREATOR had some reason for endowing animals with an organ which we possess in common with them. The Berne hospital operations had taught the surgeons that the organ could not be dispensed with. Where was the necessity for the animal experiments? Mr. HORSLEY no doubt did discover that he could cause myxœdema. What did he do towards curing it? Certainly, if one has learned that the removal

of an organ has injured its possessor, it does not require any very great amount of genius to take the further steps of replacing it, and restoring, if possible, the lost function. And this is what was done. It is said, we know not with what precise amount of truth, that in a London laboratory certain animals from whom the thyroid had been removed, and who were in consequence wasting away, discovered and ate a quantity of thyroids just removed from another set of animals, and that they, in consequence, began immediately to recover. Experiments were made by transplanting thyroids in different parts of the animals' bodies, and in many cases the most astonishing improvement in health took place. But it was not practicable to treat human patients in this manner, and it seemed that no cure would be found for myxœdema, until, at last, Dr. MURRAY, of Newcastle, by a happy inspiration, found that an injection of the extract of the thyroid gland of a sheep into myxœdemic patients would avert death and improve their health, but the treatment must be persisted in regularly or the patient relapsed. This, although a valuable remedy, is not quite the same thing as a "cure." The further step has now been taken of administering the extract in the form of tabloids by the mouth, and it is found equally efficacious as the injections. It will be seen that Vivisection has had little, if anything, to do with this beneficent discovery, which could have been made without any experiments on animals at all, had reasoning on the results of the Berne operations been allowed its legitimate exercise, but it is so much more "scientific" to mangle and mutilate animals in a laboratory than exercise the logical faculty at the bedside of the patients whom accident or disease has thrown in the way of the physician and surgeon. Recently Professor BAUMANN, of Fribourg, has succeeded in isolating the active principle of the thyroid gland of the sheep, which turns out to be simply iodine in an organic specific combination. Had chemical researches been originally made with a view to the discovery of this principle, the purpose of the thyroid gland might have been long ago discovered, and all the experiments on animals dispensed with. But Vivisection hinders rather than assists the advance of medicine.

REPORT OF THE ASYLUMS BOARD ON ANTI-TOXIN.

THE long-expected "Report of the Medical Superintendents upon the use of the Anti-toxic Serum in the Treatment of Diphtheria in the Hospitals of the Metropolitan Asylums Board" is now to hand. The document is an elaborate book of thirty-four foolscap pages, and contains no fewer than seventy-one tables, besides seven belonging to the appendix. The period covered by the report extends from January 1st, 1895, to December 31st of the same year. "No change," we are informed, "has taken place during the year in the local treatment of the cases, nor has there been any new factor in the treatment other than the injection of anti-toxin." This is a highly important point to bear in

mind, and serves to discount very largely the claims made for the new treatment. It is evident that the responsible medical superintendents of our Asylums Board Hospitals have not dared to trust their patients entirely to anti-toxin, but have merely employed it as an adjunct to the old classical treatment. We do not propose to trouble our readers with the minute and tedious tables of ages and days of the disease with the mortality per cent., but simply to go to the root of the matter and discover what effect the serum has had upon the diphtheria mortality as given in the report with which we are dealing. Tables I. to VI. deal with each hospital separately, and No. VII. gives the combined number for all the hospitals in which the cases were "treated with anti-toxin, 1895." Tables VIII. to XIII. deal with the statistics of each hospital in which the cases were treated "with anti-toxin and those not, 1895," and Table XIV. shows the same return for all the hospitals. At the Eastern Hospital the total mortality per cent. under anti-toxin was 31.1, at the North-Western Hospital 32.2, at the Western Hospital 25.4, at the South-Western Hospital 29.7, at the South-Eastern Hospital 23.6, at the Fountain Hospital 29.6. Taking all the hospitals under the Metropolitan Asylums Board in which the cases occurring in 1895 were treated with anti-toxin the mortality was 28.1. That is to say, in the words of the report, "The aggregate mortality of the anti-toxin cases for all ages, irrespective of the time of coming under treatment, was 28.1 per cent."

Here we have one great indisputable fact; after a full year's trial of anti-toxin in all the hospitals of the Metropolitan Asylums Board, the mortality from diphtheria was 28.1 per cent. The next great fact to remember is that last year the eminent throat specialist, Dr. LENNOX BROWNE, gave us tables of 1,249 cases of diphtheria treated in 1893 (before the advent of anti-toxin), with a total mortality of 332, or 26.4 per cent., and he said, "Had allowance been made for 49 cases which died within twenty-four hours of admission, this mortality would have been reduced to 283, otherwise to 22.6 per cent. The total mortality for 1894 was 314 out of 1,163 cases treated [by the old method], or 27.10 per cent. With similar allowance, the mortality would be reduced by 41 cases, or to 23.4 per cent." In this connection it is important to note that we are informed in the report that "in a certain number, the patients being moribund at the time of their arrival, and beyond the reach of any treatment, no anti-toxin was given." How true it is that figures can be made to prove anything may be gathered from the remark on page 5, that "the only method by which an accurate estimate can be obtained as to the merits of any particular form of treatment is by comparing a series of cases in which the remedy has been employed with another series not so treated, but which are similar, as far as can be, in other respects. This, in the present instance, is impossible." It is evident, then, that for comparative purposes the report is of little or no value. The report claims in the face of the facts given above that as a result of the serum

treatment there was "a lowering of the combined general mortality to a point below that of any former year."

In Table XIV., as stated above, are given "All cases, at all the hospitals, both those treated with anti-toxin and those not, 1895." Here the total mortality per cent. is 22.5. Comparing this with Table XX., "All the hospitals, all cases of diphtheria, before the use of anti-toxin, 1894," the total mortality per cent. is given as 29.6. It is thus claimed that the serum treatment has reduced the mortality by seven per cent., but Dr. LENNOX BROWNE, as quoted above, shows the mortality for 1893 and 1894 in one great hospital, under the old treatment, to have been only 26.4 and 27.10 per cent. respectively, and allowing for the cases which died within twenty-four hours after admission, the mortality was reduced to 22.6 and 23.4 per cent. respectively. In Dr. GAYTON'S series of cases at the North-Western Hospital, he considered that "those cases that under the old treatment would probably have died, were still fatal under the new; those which might get better recovered in about the same proportion, whilst the mild cases improved no more rapidly—indeed, rather the contrary." This opinion is confirmed by Professor SOERENSEN, who in the *Therapeutische Monatshefte* for March, 1896, reporting on the effects of Behring Serum in Diphtheria in the Blegdamspital, Copenhagen, sums up to the effect that the serum did not to any appreciable degree prevent the extension of the disease to the larynx; all the severe cases died, and the good result in the slighter ones was attributable to the mild type of the epidemic." (See *Practitioner*, April, 1896, p. 435.) The unprejudiced medical observer holding no brief for the bacteriological experiments, can say no more than this for anti-toxin. If we take into consideration the many accidents chargeable to its employment, skin diseases, joint troubles, paralysis, kidney disease, heart mischief, and other maladies, to say nothing of many cases of sudden death as by deadly poison, we should, as impartial critics of the serum theory, have to frame a heavy indictment against anti-toxin.

NEW ANTI-VIVISECTION EVIDENCES.

ANTHRAX—DIFFERENCE BETWEEN MEN AND ANIMALS.

(From a paper by Dr. Charles Bouchard, Professor of Clinical Medicine and Therapeutics at the Medical Faculty of Paris, printed in *The Medical Week*, Paris, March 30th, 1896, p. 134.)

"When following in Davaine's footsteps, I inject into and around a malignant pustule in a human subject a solution of iodine in salt water, the temperature falls from 41° to 37° C, the swelling subsides, and the patient recovers. Without my intervention he would unfailingly have died. Now this is certainly a triumph of antiseptic therapeutics. I have acted on the ætiological cause and killed the microbe. Very well; but if the same treatment be tried in a mouse, a rabbit, or even a sheep, the animal will almost invariably die. It may be supposed that this difference in the gravity and the therapeutical effect depends on a difference in virulence, and that the patient had been accidentally inoculated with a less active microbe.

"But this same microbe, inoculated in the animals in question, kills them, not because the virus is more potent, but because their organism is less able than that of a human subject to withstand the virus. A man can defend himself either by his organic fluids or his cells against the bacillus anthracis, without the aid of a physician. . . . Iodine injected into

the tissues adds its bactericidal action to that of his fluids, the vitality of the microbe diminishes, its proliferation becomes less energetic, and the secretion of its toxins less abundant; it is even possible that the iodine renders these toxins less injurious. In either case, the organism is enabled to get the better of the microbe through the action of its fluids or its cells. In animals less well equipped than a human subject for fighting microbes, this assistance in the shape of an artificial bactericidal or toxicidal action would have been insufficient for overcoming the morbid agent. Thus even in cases in which our intervention produces a decisive effect, and recovery would not otherwise have been obtained, the cure is brought about by natural means, and is not artificial, the re-establishment of health being the work of the organism itself, aided by a suitable treatment."

NEW DRUGS, EXPERIMENTALLY DISCOVERED, AND THEIR VALUE.

(*Ibid.*)

"The materia medica being rich in medicinal agents, and pharmacology revealing the secret of their physiological action, this period* was distinguished from the preceding by a remarkable therapeutical activity. This was the period of physiological therapeutics, full of promises and assertions, restless and noisy, but without formulating any therapeutical indication. I should be tempted to regard it as absolutely sterile, were it not that it has materially enlarged our therapeutical arsenal. This was not therapeutics, properly so called, for therapeutics is the science of indications, completely deduced from pathology. What was done was to apply blindly in the treatment of patients remedies in which some physiological property was supposed to have been detected. When a new remedy was discovered, it was employed indiscriminately in all diseases, only to be abandoned entirely within a few months or restricted to a few cases in which it appeared to have produced a good effect. This empiricism at headlong speed assumed to do in a few weeks what the patient, careful empiricism of the old school had accomplished in the course of centuries for the older remedies. We do not even yet appear to have passed entirely out of this period, in which trade interests were too closely bound up with science. Those therapeutists, however, who seek their inspiration in physiology, rather than in pathology, merely impede the general progress."

MEDICINE STILL LEARNING ELEMENTARY LESSONS, VIVISECTION NOTWITHSTANDING.

(*Ibid.*, p. 133.)

"Nearly twenty years ago medicine stuck out in a new direction, paying attention mainly to pathogenic data. It is now striving to discover why and how a person falls ill, in what manner the cause affects the organism, and by what means the latter reacts against it; it endeavours to discover the connection between successive morbid acts, and the influence which they exert on the primary cause and the series of secondary causes resulting from already existing disturbances and lesions; it tries to make out how disease proceeds toward death or recovery. It was not without hesitation and aversion that medicine started off in this direction, but at present it resolutely follows it, and is perhaps even a little too apt to forget the paths along which it has hitherto travelled. As is usually the case, the first adepts are the ones to sound the note of warning and to recommend prudence and moderation."

DIPHTHERIA.—MORE GROPING IN THE DARK.

(From a letter of its "Medical Correspondent," printed in the *St. James's Gazette*, London, April 13th, 1896.)

"I make no pretensions of knowing more about diphtheria than any one else, and quite agree with "the seniors of the profession" that "science has not mastered that disease, and that in treating it they are groping in the dark." I have insisted on that very thing many times, and also on what Mr. Boulger does not appear to know—namely, that they are in the same plight with respect to every other zymotic (indeed, I may say every constitutional) disease. But, as it happens, more is

* A period not exactly defined by the author, but comparatively recent.

known about the nature of the diphtheritic poison than about any similar poison, and more about the action of antitoxin than about the action of any other drug in that or in any similar disease. . . . Now let us take some of the best known and most established specifics in the whole range of medical science, and let me ask what is the nature of the poison of ague and how quinine acts, of psoriasis and how arsenic acts, of syphilis and how mercury and iodide of potassium act. Nobody has the remotest idea. We are far more ignorant about them than about diphtheria and antitoxin. In short, if want of knowledge is to condemn the latter, then every drug in the pharmacopœia must go too. We do not really know how anything acts, and about the most valuable substances—such as chloroform, morphia, and quinine—we have not the slightest idea."

HOME INTELLIGENCE.

LONDON.

On Tuesday evening, March 24th, an anti-vivisection lecture by Mrs. Patrick Maxwell was delivered at the Lecture Hall, Horseferry Road, Miss Elder presiding. A discussion followed.

MR. WESTCOTT'S DAILY WORK SAMPLED.

On Tuesday, April 7th, Mr. Westcott addressed a meeting of workmen at the Gas Works, Old Kent Road. There were a goodly number present, and great interest was taken in the subject. On Wednesday, April 8th, he addressed a meeting of workmen at Messrs. Peek Frean's Biscuit Works, Bermondsey. There was here also a very good muster, and he was asked to come again through the summer. On Thursday, April 9th, he addressed a meeting of workmen at Doulton's Potteries, where there was a very large muster. On Friday, April 10th, Mr. Westcott spoke to a large audience of workmen at the South Bermondsey Boiler Works. In the evening he addressed a meeting of about 200 men, in Hyde Park, and there was a short discussion after the lecture. Literature was freely distributed on each of the occasions referred to.

ANOTHER DEBATE AT ST. GEORGE'S CATHOLIC CLUB.

A second debate on vivisection was held at the St. George's Catholic Club, on Wednesday, April 13th, the opener on this occasion being Mr. Arthur Westcott, lecturer to the Society. At the close of an excellent address, extending over half-an-hour, he moved a resolution affirming that vivisection being unjustifiable on moral or utilitarian grounds ought to be forbidden and prohibited, especially as the restrictive Act in force had proved a failure. Mr. Bryan formally seconded, after which Dr. Wells, who holds a license as a vivisector under the Act, opposed. Mr. Bryan then addressed the meeting in support of the motion, as did also Mr. R. S. Wood, a working man (whose name did not transpire), Mr. H. N. Ferrers (who spoke ably and well), and Mr. Bewick. The motion was opposed by Dr. Carré and Mr. Dwyer, after which Mr. Westcott replied. The Chairman put the motion, and on a show of hands declared it to have been carried by a majority of one. The opposition challenged this decision, though it was apparently correct, and after a second count the Chairman declared that the noes had it. The debate was conducted with great spirit and good humour.

THE PECKHAM AND DULWICH BRANCH.

The second annual meeting of this society was held on Wednesday evening, April 15th, at the Public Hall, Rye Lane, Peckham. The chair was taken by William Tarver, Esq., of Honor Oak. Miss VIOLET OAKLEY read the annual report, which showed that the society had distributed much literature, and used every opportunity to address debating clubs and drawing-room meetings. The CHAIRMAN having in a brief address declared all unnecessary torture to be unjustifiable, Mrs. CHARLES MALLET moved the adoption of the report, condemning cruelty of all descriptions, but especially that of vivisection, saying that no torture of any living thing could be necessary. Mr. BENJAMIN BRYAN seconded, expatiating forcibly upon the need of a better carrying out of the existing Vivisection Act, which, as it now stood, was almost if not entirely useless as a restriction. The Inspector, of whom there was but one, with an assistant, for England and Scotland,

did not make his own report; but accepted the returns of the vivisectors themselves. That vivisection had been practised for 2,000 years with such small results was its best condemnation. Mr. WOOD having said a few effective words, Miss JESSIE CRAIGEN moved a resolution protesting against all torturing of animals for any purpose, on the principle that it is wrong to do evil that good may come. She said life must be ever growing upward or downward, ever seeking after a higher or a lower state, hence the vivisector sought for higher organisms—higher, higher, to the highest, which was man—and would not be satisfied until he got them. Mr. ARTHUR WESTCOTT briefly seconded the resolution, and it was passed. Mr. CYRIL M. DREW moved a vote of thanks to the Chairman and speakers, which met with a warm response.

SHEFFIELD.

Mr. Arthur Westcott, the Society's lecturer, proceeded to Sheffield on the 1st ult., and, in accordance with arrangements previously made with Mr. Andrew Reynolds, the head of the Workmen's Branch in the cutlery capital, spent a week in addressing various meetings and assemblages of people. On Wednesday, April 1st, Mr. Westcott spoke at a meeting in the large hall of the Y.M.C.A., when Mr. W. Jervis presided. There was a fair attendance, and great interest was taken in the lecture, which was illustrated. A resolution strongly condemning vivisection was carried unanimously at the close and a good supply of literature was distributed. On the Thursday Mr. Westcott addressed a meeting of workmen during the dinner hour, near Messrs. Cammell's Steel Works. About 150 were present, to whom literature was afterwards distributed. On Saturday, April 4th, he lectured before a very large audience at the Doncaster Street Schoolroom, Mr. Andrew Reynolds presiding. Mr. C. J. Rowntree kindly lent and manipulated his electric light lantern. The lecture was followed point by point with great interest, the men at this school evidently taking a very deep interest in our question. The subject is mentioned weekly, and so kept alive amongst the members. Many names of new members of the branch were enrolled during the week, and the working-men members at Sheffield now number over 300.

BRISTOL.

Mr. T. A. Williams, of the Bristol and West of England Branch, has, during the past month, been actively at work in his district; taking advantage of the fine weather a number of large meetings have been addressed in the open air, and much interest has been shown in the question of vivisection. Mr. Williams has also addressed a number of mercy meetings, urging kindness and proper treatment of animals.

YORK.

On Tuesday, April 21st, Mr. T. A. Williams commenced a series of meetings under the auspices of the York branch of the Victoria Street Society. A meeting was held at midday near the works of the North Eastern Railway Company, and many of the workmen expressed their sympathy in the cause of protection of animals from vivisection. In the evening a meeting was held in Parliament Street, Mr. Berbeidge presiding over a very large attendance. Mr. Williams, who spoke for ninety minutes, was listened to with great attention, and at the close a resolution, "That this meeting is of opinion that the practice of vivisection is cruel and immoral, that its results are much in dispute by high medical authority, and that it is a danger to hospital patients, and demands its prohibition by law," was unanimously carried. Several friends gave in their names as being anxious to help the cause. Other meetings have followed.

THE SCOTTISH SOCIETY.

MEETINGS IN DUMFRIES.

On Sunday, 21st March, Col. WATERSTON, Secretary, held meetings in Dumfries.

In the afternoon he lectured in Waterloo Place Chapel, and in the evening addressed a meeting in the Mission Hall, Lochbarbriggs, near Dumfries. At both meetings there were good audiences, who listened with attention.

On Monday evening, 23rd March, a conference was held

in the Louth Free Church Hall, Dumfries. Provost GLOVER presided, and there was a good attendance. The Rev. A. BREMNER having opened with prayer, the Provost briefly introduced the lecturer. The Rev. JOHN BAIRD, of Edinburgh, then delivered an address on "Pasteur and Hydrophobia." Mr. Baird, at the outset, remarked that the question of vivisection had now been before the public in an active, agitative form for about twenty-five years, and gave a brief historical sketch of the movement. He then proceeded to refer to the late M. Pasteur's career and scientific investigations. Referring to applications which were being made in this country for subscriptions to the fund for the Pasteur memorial, he remarked that it was a gratifying circumstance that these appeals had ignominiously failed. Criticising the efficacy of Pasteur's treatment, he mentioned that the results which were claimed for it had not been produced by the same experiments elsewhere. His system was often confounded with vaccination, but the two things were not in any way analogous. He argued that this report showed that wherever they found a Pasteur institute there cases of hydrophobia were multiplied instead of diminished. The enormous percentage of cases at Paris on the one hand and the low percentage of other places on the other showed that many had hydrophobia in the imagination only. In conclusion, he said that he felt the Pasteur nostrum was not a remedy, but a fraud.

Mr. GILRUTH, teacher, Academy, remarked that hydrophobia had been cured in this country by the vapour bath, and mentioned cases.

Mr. HAINING, painter, thought there was a great deal of imagination about mad dogs. No doubt some dogs were mad enough, but he thought in most cases they only wanted a good bone to cure them of their madness. When he was a young man he was bitten by a dog that was said to be mad, but had sustained no serious injury.

Councillor J. J. CLARK mentioned that for a long time he was intimately associated with an endeavour to put down the scare of rabies and hydrophobia, and he could corroborate what had been said. He thought the law was to blame in large measure for the scare.

Pastor BREMNER having made some remarks,

Provost GLOVER moved a vote of thanks to the lecturer, which was agreed to.

MEETINGS IN EDINBURGH.

DR. BERDOE'S LECTURE ABOUT VIVISECTION.

Dr. Edward Berdoe, of London, author of "Browning and the Christian Faith," etc., lectured on "Vivisection and Medical Progress" to a large audience in the saloon of the Royal Hotel, Edinburgh, on Thursday, 26th March. Deputy Surgeon-General Watson presided, and among others on the platform were Rev. John Baird, Rev. William Allan, M.A., Rev. John Campbell, Rev. Mr. Armitage, Dr. Davies, General Grant, and Councillor Waterston, Secretary.

The Rev. JOHN CAMPBELL opened the meeting with prayer.

The CHAIRMAN, in introducing Dr. Berdoe, said that the subject on which he was about to speak to them was in importance second only to the abolition of slavery.

Dr. BERDOE, at the outset, said the question of vivisection might be considered from the ethical and from the scientific standpoints—Was it right? and Was it necessary? He, however, would not speak on ethics, but would attempt to enlighten them a little on the question whether vivisection was necessary for the advancement of the healing art. Happily the world was waking to the fact that they had duties towards the lower animals, and that, though they could use them for their food, they could not, according to the moral law, and dare not, torture them. (Applause.) For his own part he was free to confess that he was not converted to the platform on which he now stood regarding the question by any argument against the utility of vivisection. He gave his adherence to it on the ethical view, and was converted by an argument of Miss Cobbe's about nineteen years ago. He saw at once that the

PRICE WAS FAR TOO HIGH

to pay for the knowledge alleged to be gained by vivisection. He was educated in the belief that all their highest knowledge in medicine and surgery was derived from experiments on living animals, that they owed all their advance to that method

of research, and now, after twenty years' study, unremitting and as thorough as he could make it, he was convinced, and that as firmly as he was of the most sacred things, that vivisection was not, and never had been, God's appointed way of learning the healing art—(applause)—that, on the contrary, the practice was as unhallowed as it had proved valueless. The history of medicine was little studied. Yet it was the history of civilization. Savages had a knowledge of surgery. In some cases their mode of treatment was as good as that of the English surgeons, with all their vivisectional experience, and even their use of medicinal herbs was probably not far short of ours. The whole foundation of medicine and surgery had been the work of primitive man. Dr. Berdoe briefly traced the history of medicine to show how we came by our knowledge, and to controvert the assertion that we knew nothing practically of medicine or surgery until vivisection began. The next question was,

WAS VIVISECTION CRUEL?

It was constantly affirmed that there was no suffering at all in the practice of vivisection, and that the animals were dissected under the influence of anæsthetics. Morphine was only a stupefier, not an anæsthetic. There was good reason why chloroform and ether should not be given to animals in vivisection, the reason being that they might die in the experimenter's hands. It was sometimes said that chloroform was discovered by experimenting on animals. That was quite untrue. Dr. Playfair said in the House of Commons that Professor Simpson experimented on rabbits, and so introduced chloroform. By reading, however, he (Dr. Berdoe) found that the two rabbits died, but that the next patient Simpson experimented on was himself, and he certainly did not die. (Laughter.) The rabbits, therefore, had nothing to do with it, but the experiments which Dr. Simpson made on himself. (Applause.) Speaking next of a lecture on snake-bite by Professor Fraser at the Royal Institution, he said they would likely soon hear that Professor Fraser had made a great discovery in consequence of experimenting upon animals. He, however, gave his case away by a few concluding remarks he made, stating that he had discovered in an old number of the *Lancet* a communication from a medical man in South Africa describing the

PRACTICE OF SNAKE VENOM

swallowing followed by the Kaffirs, and saying that these natives appeared to be rarely affected by snake bites. So that they saw all that had been discovered by so much pain and cruelty had been known to a people as savage as the Kaffirs in South Africa. The true way of discovery was by practising that spirit of observation which enlisted all other scientists, and which they prided themselves in exerting, but which vivisectionists prided themselves in not exerting—by seeing how people in other parts of the world treated diseases, and by applying those methods. (Applause.) If in the hospital they would only gather up the knowledge that was to be had, instead of practising vivisection, much more good would be done.

THE STRONGEST ARGUMENT

used by vivisectionists was that abstract and practical science were as the warp and woof of a tissue, and must not—that they could not—be separated or that any fact that had been gained in scientific literature must be of some use to practical science. It was said that, although up to the present not much good had come from the experiments, they did not know what might happen. He, however, was not of opinion that any great thing would happen, because the constitutions of the lower animals were so different from their own in illness that he did not think they could learn anything that would be of use to a patient. It was said that anti-vivisectionists were opposed to science; they were constantly charged with doing a great deal towards impeding scientific men in their work, and driving science out of the country. He did not think that could truly be said. There were a great many vivisectionists at work. It was not science anti-vivisectionists were opposed to, but cruelty. (Applause.) Everybody had hailed with delight the advent of the

NEW PHOTOGRAPHY,

and was pleased that such a method had been found to assist surgeons in looking for bullets, and needles, and foreign bodies. That involved no injustice or cruelty to inferior animals.

They could not, however, sit down patiently under the horrid tortures that were inflicted upon animals purely for speculative purposes. They did not charge vivisectionists with wanton cruelty, but believed that they did not think how cruel and unjust the practice of vivisection was. They were all interested in the medical profession, and they should insist that those people should learn their profession in a right way, and not be consenting parties to a system they did not want. (Applause.)

Questions were invited, but none asked.

On the motion of the Rev. Mr. BAIRD, Dr. BERDOE was awarded a hearty vote of thanks. A similar compliment was paid to Dr. WATSON for presiding, on the motion of Dr. DAVIS.

The Rev. WILLIAM ALLAN then closed the meeting with the Benediction.

A meeting was held at the Misses Raeburn's, Manor Place, on the 13th of April. General Grant presided. The Rev. John Baird gave an address, reviewing the work of the session. The Revs. R. B. Drummond and Wm. Allan, and Colonel Waterston also took part.

MEETINGS AT GLASGOW.

The Glasgow branch of the Scottish Society for the Total Suppression of Vivisection held their annual meeting on Friday afternoon, March 27th, in the Protestant Alliance Rooms, 12, Argyle Arcade. Mr. W. C. Maughan, J.P., president, occupied the chair, and there was a large attendance. Among others present were the Rev. John Baird, Edinburgh, and Col. Waterston, secretary. The proceedings opened with prayer by the Rev. Geo. G. Green, M.A.

THE CHAIRMAN said that the Glasgow Society was established only three years ago, but they had been enabled in that time to arrange a number of meetings, some of which were public and some of which were semi-private, the latter being through the agency of kind friends, who had given them the use of their drawing-room. These meetings had been found to be very efficacious. The society's literature had been distributed at all of them, and much good had been done. More and more friends had been brought to inquire into the subject, and see for themselves the horrible cruelty that was being perpetrated in the name of medical science. They hoped the House of Commons would yet be induced to take some action, for the purpose, at all events, of gaining a more impartial inspection into the laboratories where vivisection was carried on, as the inspectors themselves were largely in sympathy with the practice. The society, however, aimed at the total abolition of vivisection, because they were convinced that there was no necessity for its continuance.

COL. WATERSTON, the secretary, reported that meetings had been held monthly in the various districts of Glasgow; there had also been a monthly prayer meeting. There had been several Magic Lantern Entertainments and open air meetings, all of which had been well attended. The conference held in the Christian Institute in February last had been a complete success, as also the one held in Dumfries recently, while another was being arranged in Ayr. All the ministers in Glasgow and district had been supplied with literature. There had been a large increase of members in the district, and they had had a greater amount of expression of sympathy this year than in any previous one. (Applause.)

THE REV. JOHN BAIRD addressed the meeting on the general aspect of the anti-vivisection movement and showed that there were marked signs of progress all over the country.

Tea was then served and after friendly intercourse the friends left, greatly stimulated to carry on the work of the society.—The usual votes of thanks were awarded.

A meeting was held in the Ladies' Seminary, Melville Street, Pollokshields, on the 16th of April. H. A. Long, Esq., presided, and there was a fair attendance. The Rev. J. Baird delivered an address, in which he held that vivisection could not be dissociated from cruelty and human experimentation. The Rev. Dr. Kerr and Colonel Waterston also took part.

INVERNESS.

A sermon on "Cruelty to Animals" was preached in the Parish Church, Inverness, on the 29th of March, by the Rev. Charles MacEachern, who dealt specially with the crime of vivisection, and was listened to with close attention.

ANNUAL MEETING OF THE BRISTOL BRANCH.

The supporters of the Bristol and West of England Anti-Vivisection Society held their annual meeting on Saturday afternoon, March 28th, in the Blind Asylum Music Hall, Mr. J. Storrs Fry, president, in the chair.

The annual report, which was read by Mrs. Roscoe (hon. secretary), included the following:—"The work of our society is not such as makes an interesting or sensational report. There is plenty to be done in getting up meetings, distributing literature, and in correspondence, to keep our secretary very busy, but it is not such work that makes a great show at the end of the year. We trust that we are laying the foundations of a juster public opinion, and that in the time to come our work will bear fruit, but in the meantime it requires much faith to work on without being discouraged. The accounts which appear month by month in the medical papers, of experiments performed and of animals sacrificed, make one inclined to ask 'Are people all blind, that they permit such cruelties to go on in their midst?' During the year 1894 a very pressing appeal was made for funds, which brought in several handsome donations, and our society was, therefore, in a position to increase its work and usefulness. In 1895 the income was less by £150 than it had been the year before, and it was only by the greatest care and economy that the amount of work which your committee is able to record was performed. Our valued agent, Mr. T. A. Williams, has worked with unabated zeal, and has addressed nearly 300 meetings. He has travelled thousands of miles to get up and attend meetings, and has been instrumental in starting at least one society. Miss Evans has also delivered lectures in different parts of Gloucestershire, Somersetshire, Wiltshire, and Sussex, and in South Wales. In July the General Election brought a very busy time, and deputations waited upon all the parliamentary candidates in and around Bristol. Hundreds of thousands of pamphlets and leaflets have been distributed in the course of the year. In the autumn Mr. Williams, at the request of the Victoria Street Society, went to Ireland for two months to work for them. It is with great regret that we record the death of Mr. Wm. Andrews, who for many years had been a hearty friend to our cause and an active helper in our work."

Mr. T. A. WILLIAMS, the society's agent, presented a report of his work.

The Rev. Canon TETLEY, in moving the adoption of the report, strongly urged the claims of the animal creation upon man. The claim on the part of man to torture the weaker creation might well-nigh seem incredible. By what possible right did men claim it? By no other right than that which had presumed to justify every wrong since the world began—the right of the stronger. (Hear, hear.) As that noble-hearted English clergyman and gentleman, David Wright, had said, it was because man had no pity that therefore he had presumed to advance and maintain that claim, and most assuredly there must be a terrible reckoning some day for all the multiform sufferings that man had caused to the lower creation. (Hear, hear.) The appalling practice of vivisection sinned against the best feelings of human nature. It might be said that he was speaking sentiment, but while there was a sentiment which was weak, flabby, and mawkish, there was another sentiment which was nothing less than the speaking out of the noblest instincts of humanity. The groan and pain of animals decoyed into the dark habitations of the earth, and tortured beyond endurance, had entered into the ears of the Lord of Sabaoth, and they might depend upon it that there must be a reckoning for these things. In meetings of that kind they were not gathered together to hurl reckless charges at the medical profession. It was a profession eminently distinguished for mercy, and its members dispensed benevolence which was often known only to the clergy and their patients, and their reward, as far as public recognition went, could only be in the day when all things were known. He would point out, moreover, that a large proportion of the profession had no share in vivisection at all, and of those who had such a share the majority had probably been led onwards by the absorbing passion for research. (Hear, hear.) In view of the almost unintelligible apathy of the English people on the subject of vivisection, it behoved the supporters of that

society never to cease their care and diligence till the nation had rightly gauged the measure of that horrible wrong. (Hear, hear.) They must persist in their efforts until the conscience of the whole nation was aroused into activity, till at last the people came to know what was the real truth about that hateful thing, and rise up in their wrath to sweep the outrage from their midst. (Hear, hear.)

Mrs. CHARLES MALLET (London) seconded, and said that the public had their feelings lulled on the subject by such phrases as "a few rabbits are sacrificed and a thousand lives are saved," or "all great discoveries have been made through experiments on living animals." There was a steadily growing and accumulating body of medical evidence against such *obiter dicta*. They had the testimony of facts that vivisection was not more cruel than useless, and not more useless than it was misleading. (Hear, hear.) It was alleged that the animals were placed under the influence of anæsthetics, but a distinguished physician had said that it was the public who were anæsthetized, and not the animals. The public were gulled into insensibility, for, as Lord Beaconsfield said, the public were governed by phrases. Referring to hospitals, the speaker said they had read in the medical papers that hospitals existed first for medical education; and, secondly, for the relief of suffering. That was why the subscriptions to hospitals were falling off. People found that they were not giving money to relieve the sufferings of the dying, but were giving their subscriptions first to promote medical education. (Hear, hear.) The English got rid of negro slavery. What was the essence of the blackest negro slavery? It was that human beings should be deprived of the right of their own bodies, that they should be given over as goods and chattels into the hands of those who would use them for their own purposes. Those purposes might be ever so exalted, the motives might be ever so benevolent, but the English people would not tolerate slavery. When they put patients into hospitals where there was no one to look after them, poor ignorant women, perhaps, who did not dare to say anything to a learned doctor, when once they put human beings into that position, they were countenancing the blackest form of slavery if they allowed any medical practitioner, with any motive, however noble, to experiment upon a patient otherwise than for that patient's own benefit. (Hear, hear.) In conclusion, she said even supposing that vivisection gave them all that the scientists claimed for it, that it would prolong their lives and relieve their sufferings, would they have it at the price? (Hear, hear.) If vivisection did what it claimed, it involved the sacrifice of all to self, and she hoped the nation would rise up and say they would have none of it. (Hear, hear.)

The motion having been carried,

The CHAIRMAN, referring to the previous speaker's remarks respecting hospitals, said he hoped it would not go forth that the well-being and comfort and the cure of the patients of the hospitals in Bristol, at any rate, were subordinated to the pursuit of medical or surgical science in the way of experiments upon them. (Applause.) He trusted that no impression would be allowed to prevail to the detriment of those noble institutions, and he wished to bear testimony, from personal knowledge, to the invariable kindness of the members of the medical profession connected with those institutions, and the faithful and self-denying work of the nurses. (Hear, hear.) He proceeded to speak of the work done in the cause of anti-vivisection by the late Rev. David Wright, which he warmly eulogized.

Mr. W. H. FRANK moved the election of officers and Executive Committee, which was seconded by the Rev. A. C. MACPHERSON, and carried.

Mrs. TANNER moved that a petition be sent to both Houses of Parliament from that meeting, setting forth that the petitioners were opposed to the practice of vivisection as being an immoral and unmanly use of power.

Mr. MARK WHITWILL seconded, and said he had the utmost loathing for vivisection and all its ways, and cared little for the sneers and scoffs of those who professed to pity the weakness of people who protested against the practice. As for what had been said about hospitals, he could only say that if in the hospital with which he was connected any medical man was proved to be treating a

patient with any other object except the welfare of that particular patient, they would make very short work of him, and he hoped that would be the case with the presidents and the committees of all the hospitals in Bristol. (Hear, hear.)

The motion was carried with one dissentient, and the proceedings terminated with a vote of thanks to Mr. Fry for presiding.

FOREIGN INTELLIGENCE.

CEYLON LETTER.

We are glad to say that our new organ, *The Rays of Light*, published at the Musæus School and Orphanage, is taking a bold stand to help the Victoria Street Society to carry out its noble object. It hopes to devote some space in every issue to expose the horrible tortures practised on animals, and thus enlist the sympathy of all true men to the cause. The nature of the tortures inflicted is little known in the East, and some measures should be adopted to make it known to the peoples in their various vernaculars. [In the three Indian presidencies this is being done.—ED.] We are ready to do all we can to help the movement.

Our little band of workers at the Musæus School and Orphanage send all best wishes for the success of the work. We have here formed a nucleus for an anti-vivisection society. We need the help, sympathy and co-operation of all associated with the Victoria Street Society. P. DE A.

GERMANY.

DEATH FROM THE ANTI-TOXIN TREATMENT.

BERLIN, April 12.

An exceedingly sad case of what at first sight appears to be poisoning by anti-toxin occurred in Berlin last week, and in view of the extensive employment of the anti-toxin treatment in England it deserves the widest publicity. A maid-servant in the family of Dr. Langerhans, a well-known medical man, had been sent to the hospital on suspicion of suffering from diphtheria, and Dr. Langerhans allowed himself to be persuaded to inject his little son, aged one year and three-quarters, with anti-toxin as a precautionary measure. A few minutes after the operation, which the unfortunate father himself performed, the child, who was before in blooming health, was dead.

In view of this deplorable result, the State authorities saw fit to order an official *post-mortem* examination of the body, which took place on Friday. No positive diagnosis, however, of the cause of death was obtained, though it was discovered that the organs of the dead child were completely healthy and that the operation of injection had been so skilfully performed that death could not have resulted therefrom. Dr. Langerhans himself is apparently of opinion that the anti-toxin was the immediate cause of death. The remainder of the anti-toxin used for the dose has been handed to the official analyst for investigation, and until his report is published it is impossible to form any certain judgment. Already in connection with this sad occurrence a controversy has arisen in the Press as to the merits of the anti-toxin as a prophylactic. The opinions of the writers naturally differ, but all are agreed that a thorough inquiry into the circumstances of the child's death is indispensable. I may mention here that at the medical congress held recently at Wiesbaden voices were not wanting which condemned the anti-toxin treatment of diphtheria introduced by Dr. Behring as untrustworthy and dangerous.—*The "Times" Own Correspondent.*

PARIS.

THE FRENCH ANTI-VIVISECTION SOCIETY.

The annual meeting of the French Anti-Vivisection Society was held on Thursday, March 5th, at the rooms of the Horticultural Society in the Rue de Grenelle. The chair was taken at three o'clock by the president, M. ESCHENAUER, who made an admirable opening statement, noticing the progress of the society and the gradual increase of its effectiveness on public opinion. The annual report was read by the secretary, Mme. PETTI; after which the financial position was explained by

Mr. SERLE, the treasurer, and one of the most energetic spirits of the society. The proceedings were brought to a close by the election of the retiring members of the committee, and a forcible address by M. UHRICH, the President of the French Society for the Prevention of Cruelty to Animals. In the evening the business of the day was pleasantly concluded by a banquet at the Restaurant Coquet on the Boulevard de Clichy. About thirty guests and members sat down, among those present being the following:—M. Eschenauer, Mme. Petti (secretary), Mlle. Lindsay (assistant-secretary), Mme. Feresse, M. Dugué, M. Bruneau, Mr. P. Serle, M. Grandamy, Mr. Ormiston Brown, Mlle. Formstecher, Mlle. Germain, Mr. Humphreys, Mr. Smith, M. le Baron de Knyff, Mme. Feresse Deraismes, Mlle. Froment, Mlle. Marie Staub, Mme. Guény, Mme. Alossery, Mlle. Henriette Staub, M. A. Bossion, M. Lamguet, Mme. Aline Valette, M. Jules Gerbaud, M. Crick, and Mlle. Gerbaud.

UNITED STATES.

THE OHIO BILL FOR LEGALISING HUMAN VIVISECTIONS.

Mr. Philip G. Peabody, president of the New England Anti-Vivisection Society, now a most important organization, writes as follows, on this subject, in the *Boston Transcript*:—

"As it happens I have had some correspondence with the Secretary of State of Ohio regarding that most infamous of all proposed laws, providing for the vivisection of human beings. I can enlighten 'Humanity' better than most people, especially as my information is official and reliable, and not second-hand or hearsay, which is so often the case.

"House Bill No. 135 was introduced into the seventy-first General Assembly of Ohio by 'Mr. Rowlen (by request).' It provides, among other things, 'That all persons sentenced to death by any court having jurisdiction in the State of Ohio shall be held as subjects for experimental research' (meaning vivisection, pure and simple). 'That such experiments shall be conducted in the interest of science.' That 'the condemned person shall not be maltreated in any way' (this is not a joke; the vivisection has no sense of humour). 'That the executioner shall be an expert physiologist.' That 'all executions . . . shall take place within a building provided for that purpose.' 'That no one shall be present at experiments and executions except the warden or deputy warden in charge of the prisoner, the executioner, assistants and deputies, and those who have duly qualified themselves to comprehend the experimental work' (that is, all but vivisectioners are banished from the wretched victim, who is then absolutely hopeless).

"It is noteworthy that the passage of this law was urgently demanded on the exact ground on which we oppose the vivisection of animals; that is, on the ground that experiments on animals are misleading, or at best useless, and that if we desire any really useful knowledge, we must vivisection men and women, and not animals."

HYDROPHOBIA.

The following appeared in *Our Dumb Animals*, edited by Mr. George T. Angell, president of the Massachusetts Society for the Prevention of Cruelty to Animals:—

"Cases of genuine hydrophobia are very rare. From January 1st, 1842, the beginning of a systematic registration of human deaths in Massachusetts, until January 1st, 1890, there were only sixty-eight deaths of people from rabies in Massachusetts. This is an average of less than two deaths a year in a population of two-and-a-half millions. You are more liable to die of a sore toe than of hydrophobia. Fear of hydrophobia has killed more people than the disease itself.—A. MORTON, M.D., in *The Healthy Home*."

"[To the above we add that whether these sixty cases were genuine is a matter upon which medical men would differ.—EDITOR.]"

A PROPOSED RESTRICTIVE ACT.

The *Journal of Zoophily* records that a move has just been made by the Anti-Vivisection Committee of the Washington Humane Society. Its members have introduced into both Houses of Congress a Bill for the restriction of vivisection. It had been referred to the respective committees, who had as yet made no report.

ANTI-VIVISECTION STATEMENTS TRUE.—"I was lately asked whether most of the anti-vivisection statements were not gross exaggerations, if not lies, got up by a parcel of old women who doted on dogs and cats, and did not care a pin what became of human beings. To this I was obliged to reply that

the reports published are taken from vivisectioners' own manuals, giving their own pictures of the various appliances used in cutting up live animals, and their lists of the many horrible operations which can be performed before death ensues. The gross exaggeration of old women, therefore, resolves itself into the exact truth, as told by scientific investigators."—ALICE, in *Modern Society*, February 1st.

We are told by the vivisectionists that no humane or moral consideration must be allowed to stand in the way of science. Our vivisectionists are aghast at the suggestion that they should be asked to stay their hand because their experiments inflict torture. They rise superior to such trivial considerations. Mr. Justice Hawkins proposes a plan by which they could prove their much-boasted devotion to humanity. They tell us also that personally it grieves them to inflict pain, but they sacrifice their feelings for the good of humanity. Very well—here is an opportunity for them to *bear* pain for the good of humanity. What do the gentlemen say? Let a few of them come forward and offer to bear the pain they are so very eager to inflict upon other animals, and we will believe that their sentimental talk is not cant. Let one of them, in the cause of his beloved science, let one of these enthusiasts for humanity, as they say they are, submit himself to the experiment. One may be pretty confident of the answer. Not one man of science living but would prefer to let the whole of humanity rot on a dust-heap rather than suffer himself one-millionth fraction of the torture he is so very ready to inflict. —*To-Day*, March 14.

THE PARIS EXHIBITION OF 1900 AND A PRELIMINARY ANTI-VIVISECTION EXHIBITION.

WE have already published in the *Zoophilist* a suggestion that in addition to preparing an Anti-vivisection Exhibit for the Paris Exhibition of 1900, there should be earlier organized an Exhibition of objects connected with Vivisection, such as models of vivisectioned animals, vivisectioning troughs, tools, and instruments, to be moved from place to place, for the instruction and education of the public as to what Vivisection really means and involves.

As we announced, the Committee of the Society approved the proposal, and provided the funds be forthcoming, are prepared to undertake to see it carried out. It is anticipated that a considerable sum of money will be required for each of the objects, but most for the movable Exhibition. A subscription list has now been opened, and the following amounts have been already promised:—

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Further subscriptions and donations are requested, and these may be sent to the SECRETARY, 20, Victoria Street, in the usual way.

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 FOR THE PROTECTION OF ANIMALS FROM VIVISECTION
 UNITED WITH THE
International Association
 FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 2.]

LONDON, JUNE 1, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Society's Anniversary was celebrated, as arranged, on the 13th ult., when the annual business and public meetings passed off most successfully. Both were fully attended, and though some of the speakers who had been announced failed to appear, the speaking was good and sufficient, and enthusiasm was raised to an unusually high level. Reports of the speeches, together with the text of the twenty-first annual report, will be found in our special supplement.

WE are sorry to see that one writer in the *Referee* has gone over to the enemy. In its issue of April 19th it says, "As practised in this country, that is to say *exclusively with anaesthetics*, vivisection involves no cruelty to speak of." (Italics ours.) Mr. George R. Sims, of the *Referee*, knows better than that, and is well inclined towards our cause.

THE *British Medical Journal* of May 16th notes the fact that our American friends are preparing for "a strong pull, a long pull, and a pull altogether," for the suppression

of vivisection. Bills for this object are before the Senate, the Massachusetts State Legislature, and the New York State Legislature.

THE splendid legacy of 40,000 lire bequeathed in 1892, by a lady whose name remains secret, to the Turin Society for Protection of Animals seems at last to be in the way of coming into practical use as the noble donor intended. That use, according to the terms of her will, was fourfold:

1. To oppose vivisection to the utmost (*Combattere ad oltranza le Vivisezioni*).
2. Oppose the destruction of birds and their nests.
3. Oppose bull-fights.
4. Oppose pigeon matches."

The interest only on the capital sum is to be expended by the Society. If the Society fail to fulfil the conditions of the testatrix, the legacy is to lapse to the Municipality of Turin.

UNHAPPILY, the aged President of the Turin S.P.C.A., to whom this great legacy fell in 1892, Dr. Riboli, Garibaldi's friend and physician, died before he could utilize it, and he was succeeded in the presidency of the Society by Cav. Ruggeri, a gentleman who in his inauguration speech actually pronounced an elaborate defence of vivisection, on the familiar grounds of the glory of science and benefit of humanity. We have much feared that the 40,000 francs would lie for ever idle, or even be forfeited, but we now learn with great satisfaction through the Secretary, Signor Riccabone, and through that devoted friend of animals, Countess Biandrate-Morelli, that Cav. Ruggeri has resigned his office, and been succeeded by a staunch anti-vivisectionist, Baron Lucifero. May he prove a *Light Bearer*, indeed, into the "dark places" of those earthly hells, the laboratories of Italy! A letter of thanks and congratulation to the Baron on his acceptance of the office has been addressed to him by the Committee of the Victoria Street Society.

"THE reception he met with was far from encouraging," and we are glad to know it. This remark applies to a suggestion of M. Pourtalé that dogs should be preventively inoculated against hydrophobia, and the *Lancet* (April 25th), in entire ignorance of the process, for it is not described, endorses the suggestion. When M. Pourtalé laid the idea before the International Science Congress at Buda-pesth, Professor Hutérat, we learn, "while cordially recognizing the academic merit of the work, was nevertheless of opinion that it was not necessary to take any further action in regard to it," and at the Veterinary Congress held at Berne in September

last it was again vetoed, although there was a party in favour of something of the kind. We may say, in passing, that Pasteur deemed such a project unjustifiable, at all events by his own method, as he saw that an inoculated dog would be an infected dog and a source of danger. The worst feature of proposals of the kind is that they invert the true method of procedure, that is, instead of tending to eliminate morbid matter from the animal body they add to the amount of impurity by the injection of artificially prepared anti-toxins and serums. We should like to see more authorities exercise their common sense in the way that Professor Hutérat has done.

REMARKABLE to state, a vivisector has made a beneficial—and common-sense—discovery. The discoverer in this case is Mr. Hankin, an old antagonist of ours, whom we met in debate at Cambridge before he took ship and departed to serve as a bacteriologist in India, where he still remains. He did not, however, make the discovery “out of his own head,” but out of that of another man, with no pretensions to be a scientist. The *British Medical Journal* (May 9th) narrates, on the authority of Mr. Hankin, that in the case of an outbreak of cholera in the East Lancashire Regiment, when stationed at Lucknow, the E Company escaped, notwithstanding that men of the other companies, camped all round them, suffered severely. Mr. Hankin writes:—

“On questioning the colour-sergeant of this company the mystery at first appeared to deepen, for he roundly asserted that the men under his charge had exactly the same supplies of food and water as the rest of the regiment. But on his being pressed as to how he knew that the water supply was the same, he replied that he ought to know, if anybody, ‘as he boiled it himself.’ Needless to say, that on making inquiries it was found this simple sanitary precaution had not been taken by the other colour-sergeants.”

Mr. Hankin seems apparently to consider this in the light of a good story. It is so, no doubt, and as a result seems to us to call for the discharge of the experimenting bacteriologist, to be replaced by an order that all soldiers’ potable water in India shall be boiled.

It may be remembered that a year or two ago the illustrious Editor of the *British Medical Journal* took upon himself, in the character of the medical Turveydrop, to travel across the Atlantic for the benevolent purpose of giving his American brethren an unsolicited lesson in manners and deportment. More recently this energetic, not to say pushful, person has visited India with the object of impressing the authorities of our great dependency with a proper sense of the importance of sanitation. So arduous were his exertions in this direction that nothing less than a winter cruise in the Mediterranean would suffice to recruit his shattered forces, as was duly announced to an expectant world in the columns of the *Times*. It is sad to have to relate that all this self-sacrificing zeal has been worse than wasted on the objects on which it was lavished. American medical men resented as an impertinence Mr. Ernest Hart’s pretensions to pose as a paragon of medical manners; and now from India comes a vigorous protest against the infallibility of his sanitary science.

It is no less a person than our old acquaintance, Surgeon-Lieutenant-Colonel Lawrie, of chloroform fame, who raises the standard of revolt, and this is the vigorous style in which he opens his campaign:—

It is notorious that for more than a year the whole of the medical profession in India has been smarting under a series

of insults and slurs, which I shall take this opportunity of showing are wholly unmerited, that have been cast upon us by the *British Medical Journal*. This journal has been conducting a campaign on its own account against the sanitary services in India, in which the microscopic “parasite” of malaria has so far been its biggest gun. Statements have appeared from time to time that the “parasite of malaria is the greatest discovery in pathology.” “If there is one thing certain in pathology it is that a living parasite is present and can be invariably found in malarial blood.” “It is by far the most important of the animal parasites affecting man.” “Eyes sharp and trained as those of Virchow and Frerichs completely failed to recognize it lying patent under their very noses.” “The investigation of these bodies is the principal business and main duty of the Indian physician.” “It has been entirely, or almost entirely, neglected by the profession in India.” Men who write of Laveran’s bodies as “pets,” “beasts,” “brutes,” or (save the mark!) “bugs” have been extolled in the *British Medical Journal* as scientists in terms of the highest praise, while senior men of the calibre of J. M. Cunningham, Bryden, Rice, Marston, D. D. Cunningham, Crombie, Sanders, and a host of others, whose names alone call up feelings of respect and admiration throughout the length and breadth of this land, have been freely reprobated.—*Lancet*, May 16th.

STEP by step, Dr. Lawrie goes on to prove that the so-called animal parasites of malarial fever are no parasites at all, but merely altered blood-corpuscles, and as far as it is possible for outsiders to judge, it will need all the recruiting efficacy of his Mediterranean cruise to provide Mr. Ernest Hart with sufficient strength to set this humpty-dumpty parasite on its legs again.

In the course of his article Dr. Lawrie quotes from Dr. Patrick Manson an instance of human experimentation which cannot be too strongly reprobated:—

“Dr. Patrick Manson states that ‘the intravenous injection of blood containing this parasite into a healthy individual is followed by the multiplication of the parasite in the blood of the person inoculated, and also by the occurrence of the characteristic fever.’”

All will agree with Dr. Lawrie when he says, “there can be no justification for employing intravenous injections of malarial blood in the human subject;” but we also fail to see any justification either for Dr. Lawrie himself when he goes on to say that “during our investigations we did employ them repeatedly on dogs and monkeys.” These experiments proved nothing, nor were they likely to, for we never heard of either dogs or monkeys suffering from malarial fever.

It will be necessary to keep an eye on St. Mary’s Hospital and its pathologist, Mr. Jackson Clarke. This vivisector communicates an article to the *Lancet* of May 9th, in which he describes a new device for suturing divided portions of bowel. He has tried it on the dead subject and found it very effective; but he adds “I hope soon to acquire the power to test the apparatus on some suitable quadruped.” This means on some large animal, whose intestines shall be in size comparable with those of the human subject. Now experiments on the intestines are among the most painful of all vivisections. It is not so much the initial operation, which may be done under anæsthetics, but the after-suffering is in all cases great, and in the case of the failures (a large proportion), it must be excessive.

It is well for experimenters to bear in mind that even the “germ will turn,” when cultivated and otherwise experimented with too much. Dr. Ruffer caught diphtheria

when manufacturing anti-toxin, and now we have a worse case reported from the *Lancet* of March 21 :—

DEATH FROM RESEARCHES IN A BACTERIOLOGICAL LABORATORY.—A medical student named Mansvetoff, who had been engaged in researches on glanders in Professor Vorontsoff's laboratory in the Medico-Chirurgical College, St. Petersburg, contracted the disease in some unexplained manner, and it rapidly proved fatal, the lungs being affected.

A most satisfactory and encouraging step has been taken by our friends in Washington. They have pushed their Restrictive Bill so far as that the Committee of the Senate have unanimously reported in favour of it, after a very careful hearing of arguments on both sides by a sub-committee appointed *ad hoc*. Our readers will find full details as given by the able and energetic President of the Washington A.-V. Society in the Foreign Intelligence of our next issue.

MR. C. H. ROBINSON, in his new book on "Hausaland ; or Fifteen Hundred Miles through the Central Soudan," says that the Hausas treat persons bitten by a mad dog by making the patients eat some of the liver of the rabid animal. The treatment is considered quite as scientific as that of M. Pasteur, and the natives see no necessity for a Pasteur Institute in Karo, and doubtless are quite as satisfied with their own prophylactic as the Parisians are with theirs. Mr. Robinson also tells us that when a man is bitten by a snake in that part of Africa, he is at once inoculated with poison taken from another snake with uniformly good results. The Hausa barbaric medicine-men are equally successful in treating fever and dysentery with native remedies.

THE *British Medical Journal*, quoting from Dr. Ceni, says (April 25th, 1896) that certain definite changes in the nerves can constantly be found in rabbits and guinea-pigs dying of diphtheria, but are by no means so frequently seen in men who have succumbed to this malady. "In man, when atrophy of the nerve elements occurs, it is limited to a few isolated cells ; in animals, as a rule, the process affects extensive groups of cells."

DR. MONRIBOT, of Epinay, says the *Monthly Magazine of Pharmacy and Medicine* for May, claims to have discovered an infallible cure for diphtheria in tar water. He tried the remedy for ten years before announcing it to the world, and never lost a single case. Tar water as a microbe killer is at least as old as Hippocrates, only in those days microbes had never been made visible. With all the infallible cures for diphtheria, the mystery is that anyone should die of it.

As an example of the useless experiments of the physiological laboratory, the following from a paper by Mr. C. H. Starling, of Guy's Hospital, published in the *Journal of Physiology* (Vol. xix., No. 4, p. 314), is conspicuous:—"I find that after *total extirpation* of the abdominal viscera [*i.e.* removal of all the bowels, etc.] the organism reacts in the same way, as in a normal animal, to a considerable bleeding." That any practical purpose could be served by such a destructive operation it is impossible to imagine.

HERE, too, from the same *Journal* (p. 378), are some observations by Messrs. Langley and Anderson, of

Cambridge, on cats and rabbits whose sacral nerves had been cut:—"The cats in recovering from the anæsthetics showed more or less signs of hallucination, presumably due to the morphia. This was especially obvious in No. 3. . . . For half-an-hour to an hour after awaking, it was, at first, almost incessantly . . . pouncing on imaginary mice, sometimes missing them, sometimes catching and playing with them."

PROF. SCHAFER and Mr. B. Moore record in the *Proceedings of the Physiological Society*, at a meeting held at University College, London, the following experiment under date March 14th, 1896 :—"We have completely removed in a dog both parotids and both submaxillary glands [structures for secreting saliva], together with as much as possible of the sublinguals, with the object of determining whether any of these glands possesses an intrinsic internal secretion, necessary to the life of the animal," etc. "About a month after the last operation, when the dog had recovered its normal weight and was in good health, it was chloroformed and a sufficient dose of pilocarpine nitrate administered to cause a copious flow from the nose and eyes, and to induce severe diarrhœa." The experiment seems to show that dogs can get on fairly well without any salivary glands, but what bearing this has upon human medicine or surgery is not so obvious.

HARMACK and Meyer have investigated the physiological properties of Amylene Hydrate, and they have discovered (*Zeitsch. f. Klin. Med.*, vol. xxiv., 1894), that in graminivorous animals quiet sleep is produced, whereas in carnivora the symptoms of excitement and intoxication are prominent. How do such experiments as these indicate the action upon man who is both graminivorous and carnivorous?

THE report of the anti-rabic vaccinations at the Pasteur Institute in 1895 is contained in a late number of the *Annales de l'Institut Pasteur*. This shows that 1,520 persons were treated and five died. Inasmuch, however, as three of these were taken with the first symptoms which led to their death within less than a fortnight after the last inoculation they are written off entirely. This leaves two deaths, with which the average mortality is struck at 0.13 per cent. In the total number of patients, 449 were bitten by dogs suspected only of being rabid, yet all these are reckoned as if liable to a fatal issue. It should further be mentioned that through the medium of the public journals and other sources no fewer than eleven well authenticated deaths of Pasteur patients were in all made known in 1895. This is more than double the gross, and five times the reduced mortality admitted by the Pasteurian authorities, who seem to have acted most unfairly in making up their returns.

At the Physiological Society, of Berlin, on January 10th (*Nature*, February 17th), Dr. Joachimsthal related experiments of a novel kind :—

"Dr. Joachimsthal spoke on a supposed self-regulative process in muscles as based on the observation that the calf-muscles are long and thin in negroes, but short and thick in whites. This depends on the relative lengths of the calcaneum. In the negro the muscle is inserted on a longer arm of this bone, and this necessitates a more extended contraction of the muscle ; in a white man the arm is shorter, but this requires a correspondingly greater force, and hence the muscle is shorter and thicker. An experiment had been made by Marey on rabbits with reference to the above, and the speaker described

some recently made by himself on a cat in support of his views. In the subsequent discussion considerable objection was raised against the validity of the experiments, some of the results being attributed to muscular atrophy."

HOME INTELLIGENCE.

LONDON.

THE SOCIETY FOR UNITED PRAYER FOR THE PREVENTION OF CRUELTY TO ANIMALS (ESPECIALLY VIVISECTION).

The fifth annual meeting of this Society was held at Kensington Town Hall, on the afternoon of Thursday, April 30th, and was exceedingly well attended, the room being almost full. The Right Rev. Bishop Mitchinson presided, and was supported on the platform by the Rev. J. P. Fallowes, the Rev. E. T. Hitchens, the Rev. A. S. Hewlett, Miss E. Abney Walker, Miss E. M. James, and Miss S. S. Monro, whilst in the body of the hall were Col. and Mrs. Walker, Col. and Mrs. Benson, the Rev. R. D. Monro, Dr. Berdoe, Mrs. Henry Lee and Miss Lee, Mrs. Fowle, and others.

The annual report, read by the Hon. Secretary (Miss Woodward), regretted an increase of only 800 new members, the roll having risen from 5,379 to 6,243, and earnestly requested the Secretaries and individual members to redouble their efforts in this direction. The increase in foreign members had been chiefly in Scandinavia. Branches had been formed in Norway, and the number of Danish members had been greatly increased. The circulation of literature showed an increase, as it amounted to about 19,000 for the year, compared with 11,000 in the previous year. The Children's Branch of the Society, entitled the "League of Merciful Children," had started on its way, but was not yet sufficiently developed to afford matter for a report. The report also referred to Miss Winslow's work among the donkeys of Tangiers, and other matters. This was unanimously adopted.

The CHAIRMAN congratulated the Hon. Secretary and the Society upon the unceasing energy they had shown during the past year, and alluded to the great necessity there was for increased activity in the future. He pitied the animals, who suffered so much at man's hand, but he pitied also those who were guilty of cruelty, especially the vivisectors, for he could not but reflect that great harm was incurred by the men themselves who practise experiments upon living animals. In such an age as this, when materialism swayed the minds of so many men of intellect and culture, they did well to remember that the history of great civilizations, now dead and passed away, showed clearly that any civilization which was based upon materialism alone, and which did not regard with favour the refining and moral influences of religion, in due time perished. There was a great deal of materialism in our civilization to-day; he did not say, therefore, that England was decadent, and indeed he hoped not; but vivisection was the offspring of materialism, and unless it was checked and done away with, together with other forms of cruelty, then he believed our Christian civilization would perish, because it would be unworthy to exist. This Society for United Prayer against Cruelty had a great mission, but, in praying, he hoped they would all pray for the vivisector as well as for the vivisected, and he (the Bishop) prayed that the blessing of Almighty God would rest upon their petitions and labours during the coming year. (Applause.)

The Rev. J. P. FALLOWES, in a very earnest and practical speech, urged that the non-medical laity were entitled to pass judgment upon a question which was mainly one of morals, notwithstanding the dictum of the medical profession that vivisection was a question for scientists and doctors alone. (Hear, hear.) It was the one question upon which the majority of medical men were agreed, and yet many of them did not know so much about it as some of the general public. In a village or small town where there were two doctors you would find them differing in politics, and also upon other questions except vivisection, but that was the one thing which seemed to bind them in union. Still he was glad to find that a good few were opposed to the practice, denied its usefulness, and condemned its cruelty and immorality, and these were by no means undis-

tinguished in their profession. (Hear, hear.) He urged them, when their doctor told them this, that, and the other about the splendid fruits of the practice, to write to the Victoria Street Society, and they would get as much rebutting evidence as they could wish for. (Applause.)

The Rev. THEODORE HITCHENS, M.A., was very glad to know that Nonconformists like himself could join the Prayer Society, and plead to their one merciful Father on behalf of these dumb creatures whom He had created. He felt that the great question of vivisection was becoming increasingly important to them as a Christian people, since it was growing in extent, and there were great ignorance and apathy on the subject. Even now a building was being completed in his own district, near the Thames Embankment, which was to be known as "The British Institute of Preventive Medicine," but which was only another centre for vivisection. From a Return he held in his hand, and which he had obtained from the Victoria Street Society, he saw that in 1894 there were already fifty-eight places throughout the kingdom already licensed by law for this very purpose. This would be the fifty-ninth—another pimple and blotch added to the fifty-eight other blotches on the fair face of our country. Now a blotch on the face was a sign of bad blood and ill-humours, which must be cleared out of the system, and the object of the Prayer Society and similar organizations was to purify the national system, and to raise its moral tone, and when they succeeded in accomplishing that vivisection would be impossible, because people would see that it was contrary to the Divine attributes of mercy, and in opposition to the spirit of Jesus Christ, the Son of God, who hateth nothing that He hath made. (Applause.) He paid a high compliment to Miss Woodward and Dr. Berdoe for their work in the cause. (Applause.)

Miss ABNEY WALKER moved a resolution calling for the total prohibition, by law, of the practice of vivisection, and spoke at length on the cruelties of the practice and the contradictions to which, on the evidence of Sir Charles Bell and Professor Lawson Tait, it gave rise.

The Rev. A. S. HEWLETT supported, expressing his belief that there was as much general cruelty in this country as on the continent.

Mr. R. S. WOOD, as a Roman Catholic, said there were thousands of his co-religionists who were opposed to vivisection, and he himself strongly denounced the practice.

The resolution was then carried unanimously, and a collection was made during the singing of a hymn; and the Bishop having pronounced the benediction, the proceedings terminated.

A THIRD DEBATE WITH DR. CARRÉ.

On Thursday evening, April 30th, Dr. Carré delivered his stereotyped address in favour of vivisection before an audience assembled in the St. Charles's Recreation Rooms, attached to the Roman Catholic Church in Westmoreland Road, Bayswater. He was supported by Dr. Wells, a vivisector, Mr. Morton, Rev. W. F. Keogh (priest), and Mr. James St. Laurence. The opposition was led by Mr. Bryan (secretary of the Victoria Street Society), and participated in by Mr. R. S. Wood, Rev. W. H. Kent (priest), and Mr. Duverne. The debate extended over three hours, and on a division the resolution in favour of vivisection was, we regret to say, carried.

THE HUMANITARIAN LEAGUE.

The fifth annual meeting of the Humanitarian League was held at Sackville Street, on the 21st of April, under the presidency of Mr. Ernest Bell, who gave an interesting address on the aims and work of the Society. The report for 1895 showed that the year has been one of activity and progress, a number of public meetings having been held, including the National Humanitarian Conference, and various publications having been issued. The report pointed out that, as a result of the League's efforts during the past five years, the humanitarian movement had been greatly advanced.

IMPORTANT INVENTION BY MR. LAWSON TAIT.

At the Royal Institution, Albemarle Street, on the 8th ult., Mr. Lawson Tait, of Birmingham, gave a demonstration of his new electric harmostat, an instrument whereby the electric current is applied for the surgical arrest of bleeding. The principle of the instrument is the generation of heat by the resistance to the current offered by certain metals, and the

coagulation of all albuminous tissues by temperatures at or about 180 deg. Fahr. A platinum wire is enclosed in the blades of a pair of steel forceps, or any other requisite instrument, the wire being isolated by a bed of burned pipe-clay. A current of suitable voltage is turned on, the artery seized and compressed, and, in a few seconds, its tissues are so coagulated and its walls agglutinated that further passage of blood is rendered impossible. The necessity for a ligature is thus removed, and a new and completely effective method is placed in the hands of the surgeon for the treatment of surface oozing. Mr. Tait's invention has been fully tried under circumstances of the most difficult kind.

BATH.

The Society's hon. correspondent at Bath, who is not only an anti-vivisectionist, but manager of the Dogs' Home, and the friend of animals all round, has just achieved a great success in inducing the local authority to rescind an order for muzzling dogs, after it had been in existence a fortnight, on the ground that rabies was non-existent. As a result, she finds herself with fifty-one homeless dogs on her hands, and responsible for their housing and sustenance. Should any of our friends be disposed to share the burden with her, Miss Haigh, who resides at Sydney Place, Bath, will be happy to hear from them.

MANCHESTER DISTRICT.

On the 24th ult., Mrs. BENNETT delivered an Anti-vivisection lecture in the Reform Club, Heywood. There was a fair attendance. In criticising vivisection as a method of research she had not a word to say against the large band of hard-working men engaged in the "healing art"—she meant our doctors—most of whom were kind-hearted, generous, sympathetic men, who had never seen a vivisection in their lives, and had never had time to look thoroughly into the merits of the question. The men she would discuss were those who spent their lives in the physiological laboratory, doing their horrible, gruesome work—the men who followed vivisection as a calling, and who, in most cases, did nothing else, few of them being either physicians or surgeons. She then went minutely into the subject, and, in conclusion, made an appeal against vivisection, and for further legislation to banish from our land this cruel and unjustifiable method of gaining knowledge.

Another lecture was delivered at Heywood on the 6th of May, when Miss BEATRICE HODGSON spoke to an audience in the Co-operative Society's Board-room on "Anti-vivisection." Mrs. Schofield (the president), occupied the chair, and those present included Mrs. Schofield (the secretary), of Hopwood, Mrs. Lancaster, and Mrs. Holt.

Under the auspices of the Friends' Adult School Mutual Improvement Society a lecture on "Vivisection" was given by Mr. B. SUGDEN, of the Manchester Friends' Anti-Vivisection Society, in the Lord Street schoolroom, Radcliffe, on Wednesday night, May 6th. Mr. John Brierley presided, and said the subject of the lecture was more of a repulsive than an attractive nature. It was, however, a very important one and had to do with an important part of Christian work—the law of kindness to dumb creatures. If the practice of vivisection was allowed to continue it would negate all the efforts that Christian people were making to instil into the minds of the young a love for dumb animals. That was one of the great reasons why it behoved all Christian people to give some attention to vivisection. He trusted that all would leave that meeting with a desire to do all in their power to discountenance the practice. —The LECTURER, after stating that his remarks were not aimed at the medical profession as a whole, contended that vivisection had never led to a discovery worthy of the name; it had on the contrary delayed discovery and added to suffering of men and animals. He hoped that before they gave a vote to any Parliamentary candidate they would get to know his views upon the question of vivisection.

LEEDS.

Under the auspices of the Leeds Branch of the Victoria Street Society, a meeting was held on Wednesday evening, April 22nd, in the Philosophical Hall, Park Row. There was a fairly numerous attendance.

Colonel COULSON, of Northumberland, who presided, said they felt it necessary to speak against the action of some members of a noble profession, not because they believed those gentlemen were diabolically cruel intentionally, but because they believed medical men were mistaken. Let them stand up for those who were speechless, and could not ask for intervention on their own behalf. They did not expect this world to be a paradise, but they did think it might be a little kinder and better than it was. (Applause.)

Miss EDITH WARD said it was a great mistake to suppose that anti-vivisectionists were narrow-minded people, who had no sympathy with properly conducted scientific research. They were not in the least anti-scientific. (Hear, hear.) She protested against the cruelties of vivisection.

The Rev. PHILIP WICKSTEED said that if there was any truth in the professions of English vivisectionists he thought they should welcome more inspection of their laboratories, so that their hands might be strengthened against the temptations and pressure which came upon them. (Hear, hear.) But vivisectionists and the majority of the medical profession resented as an impertinence and insult a desire on the part of others to have anything beyond their own general assertion that there was no appreciable inhumanity in the English laboratories. It was a fatal mistake to trust any body of specialists and experts with the moral judgment of their own case. (Hear, hear.) As soon as scientific men took a wide view of their function, the anti-vivisection cause would be won, for it was not only the cause of animals, but the cause of humanity and of science. (Applause.)

A Medical Student and Mr. W. HOWGATE supported vivisection.

Mr. J. LATCHMORE moved a resolution declaring that vivisection, as frequently carried out, was a cruel and debasing practice, and that the most earnest efforts should be made to prevent its continuance.

Mr. F. BROWN seconded.

As an amendment, Mr. HOWGATE proposed, "That in the opinion of this meeting, the conditions under which licenses are granted are a sufficient guarantee against cruelty being practised by medical men."

This also was seconded, but, on being put to the vote, it was only supported by five members of the audience. The resolution was then carried by a large majority.

On the motion of Professor ARNOLD LUPTON, a vote of thanks was accorded to the speakers, and the proceedings then terminated.

YORK.

At the York Corn Exchange, on Thursday, April 30th, an address was given by Mr. T. A. WILLIAMS, of Bristol, whose subject was "Experiments upon Animals and Men." Mr. J. H. Turner took the chair, and there was a fair attendance. After Mr. Williams had spoken at length and very effectively against experiments of the kinds indicated, Mr. T. H. STOREY moved, "That this meeting is of opinion that the practice of experimenting upon living animals is cruel, and that the results of the practice are in much dispute by medical authorities, and, moreover, it believes that the practice leads to human experimentation, and becomes a danger to hospital patients. It therefore asks Parliament to pass a Bill to prohibit the practice." The resolution was seconded by Mr. Councillor PARKINSON, supported by Mrs. RICHARDSON, and carried.

SOUTHPORT.

ANNUAL MEETING OF THE LOCAL BRANCH.

The annual meeting of the Southport branch of the Anti-Vivisection Society was held at the Temperance Institute on Thursday, May 14th. Mr. Joseph Hicks presided, and there were present Miss Kate Ryley, hon. secretary; Miss Smith, hon. treasurer; Miss Wall; Messrs. Cheetham, W. Rees, J. Brimclow, J. Stylin, and others.

Miss KATE RYLEY presented the annual report, which was of an encouraging character. The report and balance sheet were approved and adopted, and the committee re-appointed. Miss HODGSON delivered an address against vivisection, after which a lecture was given by Mr. ARTHUR WESTCOTT. It disclosed a wide acquaintance with the subject and was

illustrated by limelight views. At the outset he stated that although the cause appeared to be backward in Southport, and their numbers were small that evening, in London, whence he had come, recent events filled him full of encouragement and hope. They held the annual meeting of the Victoria Street Society on the previous afternoon in a public hall near Trafalgar Square. The hall was not large enough to hold the members and friends who wished to be present. A great meeting was held in the evening, at which Lord Coleridge presided, and gave a thoughtful and stimulating address. The hall was filled with nearly a thousand people, many of whom were workpeople who had come seven or eight miles to the meeting. This was very encouraging to the anti-vivisectionists. Their position was consolidated by a book which had just been written by Sir Benjamin Ward Richardson, who was well-known as a former vivisectionist, although, perhaps, not a very bad one. He had been an advocate of vivisection for years past, and in his book he conceded nine-tenths of the arguments of the anti-vivisectionists. The author stated clearly and plainly that the experiments upon live animals were not indispensable, reliable, or conclusive, and could not possibly be so. Such evidence as that, especially from the pen of a vivisectionist, was encouraging, for although their numbers were small, they saw that their ideas were taking root and growing up even in the professional as well as the popular mind. He went on to speak of M. Pasteur's researches.

At the close of the lecture a hearty vote of thanks was accorded to the lecturer, and to the chairman for presiding.

BRISTOL.

On Monday evening, May 11th, in St. Luke's School-room, Bedminster, Mr. T. A. WILLIAMS, of the Bristol and West of England Anti-Vivisection Society, delivered a lecture on "Vivisection and the Hospitals." The Rev. A. B. Purchase presided. It was resolved, on the proposition of Mr. BUTCHARD, seconded by Mr. LLEWELLIN, "That this meeting is of opinion that vivisection is cruel; that the results from the practice are in much dispute by high medical authority; and, moreover, the practice is dangerous to hospital patients."

HOVE (BRIGHTON).

A meeting was held in the Banqueting Room of the Hove Town Hall, on the afternoon of the 21st ult., under the auspices of the Brighton and Hove Branches of the London Anti-Vivisection Society, for the purpose of protesting against the practice of vivisection. There was a good attendance, including many well-known residents. The Rev. Seymer Terry presided. Mrs. CHARLES MALLET, of London, delivered the principal address, and secured the close attention of her audience. Mrs. Theodore Russell Monro also spoke, and a strong anti-vivisectionist feeling was elicited.

THE SCOTTISH SOCIETY.

ABERDEEN.

On Sunday forenoon, the 19th April, Colonel Waterston lectured in Albion Street Congregational Church to a good audience.

On Monday afternoon, 20th April, in the Young Men's Christian Institute, an address on the subject of "Pasteur and Hydrophobia" was delivered by Rev. John Baird, Edinburgh, of the Scottish Anti-Vivisection Society. In the absence, through indisposition, of Dr. Alexander Walker, Rev. R. M. Cairney was called to the chair, and the Rev. J. Bissett, M.A., opened the meeting with prayer.

EDINBURGH.

The closing prayer meeting for the season was held in the Bible Society's Rooms on Tuesday, the 21st April. Mr. George McRobert, Missionary, presided, and the attendance was good.

DUNDEE.

On Sunday evening, the 26th April, the Rev. Wm. Allan, M.A., preached a sermon in the Lochee Road United Presbyterian Church.

On Monday evening a public meeting was held in the same place, the Rev. John Bassett presiding. Colonel Waterston gave an address on the "Methods of investigation that were

carried on in the Medical Schools, and the Nature of the Experiments conducted on Living Animals." The Rev. Wm. Allan, M.A., also spoke.

A number of lime-light views, showing animals under experiment and the instruments used by vivisectionists, were exhibited.

AYR.

An address on "Pasteur and Hydrophobia" was delivered by the Rev. John Baird, Edinburgh, in the Y.M.C.A. Rooms, Ayr, on 11th May. The Rev. George Copland, M.A., presided and the attendance was fairly good.

OUR CAUSE IN THE PRESS.

THE BURDEN OF CRUELTY.

(FROM THE "HASTINGS AND ST. LEONARD'S CHRONICLE,"
APRIL 29TH.)

SIR,—In one of your "Current Comments" you very rightly condemn cruel treatment of children, remarking that "the nature that could deliberately and habitually illtreat a helpless infant must be of the most brutalized kind."

I think we should steadily keep in mind the fact that the cruelty which prevails so widely among us does not extend only to children and other weak members of the human family; its hand lies heavy also on the lower animal races, and, to be viewed rightly, it must be viewed in this double connection. Cruelty to man is fostered by cruelty to bird and beast. If we wish to stamp out the first curse we must stamp out the second. It is sheer nonsense to expect more tenderness for women and helpless children while we as a nation support vivisection, for instance, a system whereby animals are deliberately tortured in order that mankind may have a better chance of curing the diseases which they mainly bring on themselves by perverse habits of life.

You say, "Men and women often sink below the brutes." That is quite true; but has not the observation a wider sweep than you intended? Does not a nation, like our own, which fights disease by laying a burden on dumb animals instead of seeking remedies by lawful methods, "sink below the brutes?" In my opinion it certainly does. There surely cannot be a meaner soul than a person who, to cure his own infirmities, would seize a defenceless animal and torture it. And that is just what we as a nation are doing. We cannot get out of the difficulty by alleging that we acquiesce in this system in order that others may be benefited. We have no right to sacrifice animals for the benefit of our fellow-creatures in this way. If we want to help others, let us sacrifice ourselves.

"To teach better things is the mission of the Christian Church." This is true again, but not only with regard to barbarity to children. Let the Church shake herself out of her lethargy and callousness, and examine the question of vivisection. She will never do much towards quickening humanity regarding children until she speaks up for justice to the lower creatures.

At present the clergy get out of the disagreeable duty of studying vivisection with all its horrible details by pretending to believe that it is a doctors' question. It is nothing of the sort. It is a question for moral and spiritual teachers. Any shallow-brained person can ascertain whether or no animals are tortured under the system, and it is a matter of the easiest kind to settle whether it is right to try to alleviate our pains by the torture of the brutes.

Compared with a great moral question like this, all the outside trappings of religion, its forms and ceremonies which take up so much time and thought and lead to so much contention, are little better than infantile amusements.

Yours truly,

(REV.) J. STRATTON.

Wokingham, April 24th, 1896.

DEATHS FROM ANTI-TOXIN.

(FROM THE "CORK CONSTITUTION," APRIL 30TH.)

SIR,—I notice in your issue of the 22nd, a note on the subject of the recent death in Berlin of the child of Professor Langerhans, after an injection of anti-toxin had been made

into it. It should be clearly understood that this was a preventive inoculation, made when the child was in good health—as distinguished from inoculation made to stay the progress of the malady of diphtheria when it had actually broken out—and its life was sacrificed. The *Standard's* Berlin correspondent, under date of April 13th, reported "That Dr. Langerhans himself is apparently of opinion that the anti-toxin was the immediate cause of death." It is therefore not correct to say, as your note, based on the *British Medical Journal*, stated, that there is no reason for connecting the death with anti-toxin. The most appalling feature of the case is that the father himself was the operator, and that the child died in a few minutes after the inoculation had been made.

I can well conceive, sir, that in writing your note you hoped that the worst aspect of the case was not the true one. I could quite have shared your hope had there not been so much evidence tending to invalidate it. Two similar cases had arisen before, and another had been chronicled since, the latter in the pages of the *British Medical Journal* itself (April 25th, p. 105). This case occurred at Wheelersburg, Oregon, in the United States, and was reported in the *New York Medical News* of April 11th—"A practitioner who has had considerable experience in the use of serum injected the usual prophylactic dose over the scapula of a boy aged five years while asleep. An hour before the injection the child was known to be in perfect health. In less than five minutes afterwards the doctor was hastily summoned from an adjoining room to find the boy was dead." The third case is that of a child at Buda-Pesth, recorded in the *Journal of Medicine of Paris*, February 24th, 1895. This child was three years old, was inoculated preventively, and died five days afterwards.

The fourth case is recorded in the *British Medical Journal* (July 20th, 1895, p. 172), as having been related at a recent meeting of the *Société Médicale des Hôpitaux*, by M. Mozare. The death here again "resulted from the injection of Roux's serum in the case of a child who was not attacked by diphtheria."

I submit, sir, than on these facts—four lives having been absolutely sacrificed thereby—it should be admitted that the preventive inoculation of anti-toxin in healthy persons is indefensible. Its inoculation in persons suffering from diphtheria is different; but yet its use in London the end of last year and beginning of this did not prevent the total death-rate from diphtheria rising to a higher level than it had ever done before.—I am, etc.,

BENJAMIN BRYAN,

Secretary, Society for the Protection of Animals from Vivisection.

20, Victoria street, London, S.W., April 28th, 1896.

VIVISECTION OF MEN.

(FROM THE "BRIGHTON AND HOVE GUARDIAN," MAY 6TH.)

SIR,—In your report of the recent Anti-Vivisection meeting at Hove Town Hall there was an important omission, which I should be glad if you would allow me to supply. Reference was made to a Bill brought forward by a physician in the Ohio Legislature, and the following quotations from the Bill were made, but not mentioned in your report:—

"That all persons sentenced to death by any Court having jurisdiction in the State of Ohio, shall be held as subjects for experimental research, that such experiments shall be conducted in the interest of science and society.

"That the executioner shall be an expert physiologist, duly appointed and authorized by the State, and that such appointments to execute and conduct such experiments shall be vested in the Governor, and shall consist of one executioner and five assistant physiologists, with a like number of deputies, who shall hold their office for the term of good behaviour, except upon proof of incompetency.

"That no one shall be present at experiments except the warden in charge of the prisoner, the executioner, assistants, and deputies, and those who have duly qualified themselves to comprehend the experimental work."

In the dark and middle ages it was a not uncommon practice to deliver criminals to the physiologists for experimental purposes. But, in those times, torture was looked upon as the proper treatment of those who had fallen under

the ban of the law. Civilized nations have now, however, discarded torture as a legalised system, and they seek to use the swiftest forms of capital punishment for their criminals. We see what the cruel practice of vivisection of non-human animals is bringing us to. The Ohio law was not passed, but will probably be re-introduced,—let us hope, only to be again rejected.—Your obedient servant,

HENRIETTA I. MUNRO,

Hon. Sec., London Anti-Vivisection Society.

DEPUTY-SURGEON-GENERAL THORNTON, C.B., in a letter addressed to the Editor of the *Referee*, *apropos* of some remarks in favour of vivisection appearing in that paper, said:—

"It is evident that the writer of the remarks I refer to does not in the least understand the chief reason of our objections to vivisection, namely, that this matter of research is immoral and unjustifiable, and certain to cause great evils and lead to the most dangerous and dreadful consequences. The results of the vivisection of animals have hitherto been so doubtful, and the conclusions drawn from them so contradictory, that little value can be attached to them. Hence a desire has arisen, and has found expression in some quarters, that these experiments should be repeated upon living human beings. This statement may be received with incredulity, yet human vivisection is no novelty, but appears to have been practised largely in former times. The ancient Egyptians are believed to have had recourse to this method of research; the Greek and Alexandrian physicians are known to have practised it extremely, using slaves for this purpose, and in the Middle Ages criminals were vivisected by certain Italian experimenters at Florence and elsewhere. Many, doubtless, will find it difficult to believe that such atrocities could be perpetrated in the present age. But human nature has not greatly changed, and beneath the thin veneer of civilization the same passions and desires still exist in undiminished strength. There are still great numbers of people who from inherited disposition, evil associations, bad surroundings, and vicious training, have become callous and indifferent, or even brutal and cruel. These, however, are mostly persons of little education and culture, and they are far less dangerous to the public weal than the highly educated men who devote themselves to the practice of vivisection."

The Anti-Vivisection Society, 10, CROSS STREET, CALCUTTA, INDIA.

His Highness the Hon. the Maharajah of Darbhanga,
President.

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AS TO THE

IMMORALITY, CRUELTY, AND FUTILITY

OF

EXPERIMENTS ON LIVING ANIMALS.

By BENJAMIN BRYAN.

LONDON:

SOCIETY FOR THE PROTECTION OF ANIMALS FROM
VIVISECTION, 20, VICTORIA STREET, S.W.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, JUNE 1st, 1896.

THE FIASCO OF EXPERIMENTAL PHYSIOLOGY.

IN an age like the present, when physical science has made such advance that it dominates the thought of the western world, it is not surprising that the most strenuous efforts should be made to extend its conquests to the domain of medicine. Of all branches of knowledge claiming to be sciences none has yielded less satisfactory results than that of medicine. MONTAIGNE said, three hundred years ago, that "the arts that promise to keep our bodies and souls in health promise a great deal, but withal, there is none that less keep their promise. And in our times, those that make profession of these arts amongst us, less manifest the effects than any other sort of men." Things are not much better to-day. Doctors do not promise so much, but their scientific assumption leads their patients to attribute to them powers which they are far enough from possessing. The true physician is the most modest of men; it is only the impostors who are self-confident. There is more honesty, but little more science, than MONTAIGNE discovered. To redeem medicine from the reproach of empiricism and to settle it on some solid basis of knowledge, the aid of experiment has been called in, and the methods which have availed to lift chemistry from charlatanism to its present exalted position have been employed to exalt medicine, which can never be anything but an art, to the dignity of a science. ROGER BACON, six hundred years ago, proved himself far in advance of his time by his insistence on the supremacy of experiment. "Experiment," he said, "verifies conclusions, discovers truths, and investigates the secrets of nature"—anticipating the position which FRANCIS BACON in future ages would so splendidly maintain.

But medicine not being a science, and as we can no more make it one than we can make literature, poetry, or painting a science, the question arises, what is the precise relation of experiment to the art of medicine? ROGER BACON'S axioms concerning experiment apply only to such sciences as chemistry and electricity; we can verify no conclusions in medicine by experiment, discover no truths,

nor investigate any secrets by such a method. This is why Sir CHARLES BELL said, "Experiments have never been the means of discovery;" the distinguished physiologist was not depreciating the value of experiments in their proper sphere, all he meant to say was that in relation to practical medicine they had led to no beneficial discoveries. Their tendency is uniformly to mislead, and the reason is not far to seek. When the chemist tries an experiment he knows precisely what is the constitution of the bodies with which he is dealing, and can always ensure that his processes are carried out under the precise conditions he requires. But with living organisms this is impossible. Hence the misleading character of such operations. The conditions can never be relied upon as being the same. The frog's nerve is not precisely the same as a man's nerve, still less is the healthy frog's nerve like the diseased structure of a human being. The gastric juice of the dog is altogether different from that of man, and the healthy stomach of a human being is far from behaving in the same manner as the diseased organ behaves.

A very curious and instructive illustration of the futility of arguing from experiments on animals to the treatment of the disordered or diseased human subject is afforded in a paper read before the Homburg Medical Society, by Professor CARL VON NOORDEN, of Frankfort, and published in the *Practitioner* for March, 1896. The lecture deals with the influence of salt springs on metabolism in man.

Metabolism, we may perhaps explain, is the process by which living organisms incorporate the substances obtained from their food into their own tissues and so assimilate them. Certain experiments were made, said Dr. VON NOORDEN, on dogs and healthy men, which showed that after taking common salt the excretion of urea was increased, and that saline waters increase the metabolism of albumen. If this were the fact, says the Professor, the death-sentence of saline waters would be pronounced, for they would be ranked with poisons destructive of protoplasm. Now mark the Professor's conclusions. He says, "Its effect on healthy subjects is of no value for our purpose. We cannot limit our investigation of this subject to healthy persons. We have so often already seen that the action of morbid organs is promptly upset on the slightest mechanical, thermic, and chemical irritation, whilst any quantity of similar irritation has no definite effect on a healthy organ."

Then the Professor goes on to expose the fiasco which experimental physiology has suffered in this connection, and complains that physiology now-a-days denies and denounces what it cannot explain. The true physician, he says, must stick to facts established by experience at the bedside, and not seek for knowledge in the physiological laboratory. But what shall we say of those who test the action of drugs on animals tortured on the physiologist's rack, and pretend to decide from the phenomena exhibited by lacerated and mangled tissues of animals unlike ourselves how we shall be treated in our

various ailments tucked up in our comfortable beds? Can this be science? Emphatically No! says Dr. NIEMEYER in his famous *Text-book of Medicine*, "I lamented that physicians, instead of striving to promote the healing art by their own efforts, should seek aid from the institutes of physiology and pathology, or from the laboratory of the chemist, obtaining now and then an ingenious suggestion, but never gaining an idea serviceable in the relief of an afflicted fellow-creature. I further showed that experiments made with medicaments upon the lower animals, or upon healthy human beings, with all their scientific value, had as yet been of no direct service to our means of treating disease, and that a continuation of such experiments gave no prospect of such service."

TWENTY-FIRST ANNUAL REPORT OF THE VICTORIA STREET AND INTERNATIONAL SOCIETY.

THE following is the full text of the Report presented to the Annual Meeting on the 13th ult. :—

The Society's Annual Meeting of last year was held in St. Martin's Town Hall on the 13th June. It was presided over by Mr. SAMUEL SMITH, M.P., who made an interesting speech before a good attendance. A pleasant innovation was made in the provision of tea at the close of the proceedings, through the kindness of Mrs. A. J. WALTER, who generously favours the Society in a similar manner again this year.

Although the past twelve months have not been marked by the introduction into Parliament of a Bill embodying the objects of the Society, the General Election which took place last year having deprived the Society of some of its Parliamentary supporters, still your Committee are thankful yet to retain the presence in the House of Commons of several good men and true, notably Mr. JOHN MORLEY, Sir R. T. REID, Q.C., Mr. THOS. BURT, Col. LOCKWOOD, Mr. SAMUEL SMITH, Mr. JOHN E. ELLIS, and Mr. JUSTIN MCCARTHY. The order book of the House of Commons is now so crowded, and so much of the time of Parliament is taken up by the Government of the day for their own business, that it is clear that had the Society's Bill been introduced this year, it would have had no chance of a hearing. Your Committee are yet confident that sooner or later they will be able to make a serious effort in the direction of legislation, when public opinion has been further trained to demand it.

Closely connected with the question of legislation is that of inducing the majority of the electorate to regard with a friendly eye the cause and claims of the Society, and perhaps the most important work of the past year was that of organising and delivering lectures to explain and enforce the Society's views in various parts of the country. In this behalf your Committee gratefully record that the Special Lecture Fund—started at the National Conference held at Nottingham in the autumn of 1893, and liberally contributed to by the members and

friends of the Society—has been of the greatest possible service. By its means, during the past year, three lecturers were employed, besides occasional helpers on special occasions, and 390 lectures and addresses were delivered to a great variety of audiences in all grades of society.

Mr. A. WESTCOTT has continued his work amongst the working-men in and around London with unabated vigour, and has delivered many lectures, frequently accompanied by lantern illustrations, to leading political clubs and influential societies. In the summer months also, in addition to outdoor lectures in Hyde Park, Clerkenwell Green, Battersea Park, and other open spaces, he has delivered many addresses to the work-people at large factories and works. His lectures have met with much favour, and in several cases among the clubs he has been invited to come again—sometimes more than once—to give further information on the subject. His experience, like that of other speakers for our Cause, is that the working man is nearly always on the right side when the case is fairly explained to him. In many cases a resolution condemnatory of Vivisection has been put and carried by large majorities. In addition to his London work, Mr. WESTCOTT has made tours in connection with the Branch Societies in the neighbourhoods of Exeter, Sheffield, and Reading, and in all cases he has given satisfaction to the promoters of the meetings and has secured favourable notices in the local papers.

A new feature in the work of the year has been a series of lectures amongst the Women's Liberal Associations, by a member of the Executive of the Women's Liberal Federation. In this and other connections audiences have been addressed by the lecturer at Brighton, Hastings, Guildford, Manchester, Ratcliffe, Didsbury, Ashton-under-Lyne, Oldham, Gorton, Chorley, Plymouth, Sheffield, Halifax, Nottingham, St. Helen's, Oxford, Hornsey, Hackney, Barnet, and Finchley. From the great majority of the Women's Liberal Association meetings, strong and decisive resolutions urging prohibition have been carried and ordered to be sent to the HOME SECRETARY. These lectures have also stimulated discussion and drawn other speakers into the field, and thus have had a double influence. Experience seems to show that lack of knowledge, rather than lack of feeling, has hitherto prevented a strong expression on the subject on the part of the women of England; and there are signs that the weight of this far-reaching Federation may before long be thrown into the scale in favour of justice to the animals. At the Council meetings held in May last year, a resolution urging the prohibition of experimentation on animals was carried by 305 votes to 147 in a meeting numbering between 800 and 900 delegates, representing Women's Liberal Associations in all parts of the country with an aggregate membership of 82,000.

Another important outcome of the Lecture Fund was the campaign in Ireland undertaken by Mr. T. A. WILLIAMS. As will be known to all who follow the

fortunes of our Cause, the Guardians of the Cork Union passed a resolution in favour of the foundation of a Pasteur Institute in Ireland, and urged all other Boards of Guardians to follow their example and to press the proposal on the Government. The Executive Committee at Victoria Street thought this move could best be met by an energetic campaign in Ireland, and they promptly despatched Mr. WILLIAMS—by arrangement with the Bristol and Clifton Society, by which he is regularly employed—to Dublin. There he not only delivered many addresses, but also got into communication with the sympathisers in our movement, distributed much literature, and succeeded in obtaining the insertion of many letters on the subject in influential papers. Thence he proceeded to Cork, where he adopted the same means, but naturally did not meet with so friendly a welcome. While in that city he published in the *Cork Constitution* a challenge to debate the Pasteur question in a public hall with Dr. HARDING, who originated the proposal of an Institute for Ireland. The challenge was not accepted by that prudent gentleman. He afterwards visited Belfast, where, after a successful week, he finished with a large meeting, lasting four hours, presided over by a medical man, and reported to the length of two columns in the *Belfast News-letter*. The resolution passed at this meeting against the proposed Pasteur Institute was sent to all the Boards of Guardians throughout the country.

During the eight weeks he spent in Ireland, besides addressing many meetings and writing numerous letters, he was instrumental in distributing about 107,700 pamphlets of various kinds on the subject of Vivisection in general, and in particular treating of the Pasteurian methods, fallacies, and cruelties. Since his return we have heard much less about the proposed Institute, and may hope that the proposal has been effectually checked, at any rate for some time.

Mr. WILLIAMS has since lectured in the West of England, and within the last few weeks at York and Leeds. Mr. WESTCOTT has continued his campaign in London, in addition to making tours to Sheffield and elsewhere; in fact, all the Societies' lecturers continue their efforts on behalf of the Cause.

In July last Miss COBBE published a pamphlet on "The Divine Law of Love," followed by an article in the *Contemporary Review* on "The Ethics of Zoophily." The pamphlet referred to owed its origin to the discovery that a teacher of the Roman Catholic College at Stonyhurst was inculcating as a matter of ethics the doctrine that animals have no rights—that they are things, chattels, and to be regarded like stocks or stones. Seeing that the late CARDINAL MANNING was for years a Vice-President of the Society, and an advocate of its Cause, the discovery that the Church of Rome in England was promulgating such teaching as this came upon your Committee, and they believe also on all friends of animals, with a shock of surprise. It may be the teaching of the Roman Church, but all Catholics do not accept it, and in England, at any rate, it is to be hoped it will be long ere they do so, whatever of authority such notions may have at their back.

Owing to the revelation, through the agency of Mr. P. G. PRABODY and Dr. BAUDRY, who paid a visit to Alfort about the middle of last year, that the old practice of mercilessly vivisectioning horses still went on at Alfort, Miss COBBE compiled a brief historical account of the subject, which was published as a supplement to the *Zoophilist* in November last. It had been hoped that these practices, in consequence of steps that were taken some twenty years ago, had been abandoned, or reduced to a minimum. It was, therefore, a painful surprise to your committee to find that such was not the case. How to obtain reform or prevention was a very difficult problem, seeing that the French Executive Government is now liable to such frequent change as to prevent any minister from becoming fully acquainted with the facts connected with the department which he nominally controls. The French Anti-vivisection Society was set in motion, the French Embassy in London interviewed (when a promise was obtained that information should be sent to the Government in Paris), and details of the Alfort atrocities have been published in some of the Paris newspapers—notably the *New York Herald* and *L'Eclair*. Little success has, however, yet been registered, but your committee hope that, should the new Ministry now installed in Paris become firmly established, M. MÉLINE, who is at once Premier and Minister of Agriculture, will enforce the humane regulation of 1878, whereby the operations of the veterinary students are limited to dead horses.

The official annual return, covering the year 1894, but not published till the month of July, 1895, your committee observed, reported for the first time since 1888, a diminution in the number of experiments made on living animals. They wish they could believe that this abatement of the amount of vivisection perpetrated in this country was a real one; but seeing that it is entirely in the hands of the vivisectioners to enlarge or limit their figures, further evidence is required before this view can be accepted. An anomalous feature of the return, and one to which attention has already been directed in the *Zoophilist*, is the annual statement that a considerable number—sometimes more, sometimes less—of those who have gone through all the routine of obtaining licenses and got them, have yet returned no experiments. Their statement on the subject is final; there is no means of testing or getting behind it. Neither the Inspectors nor the HOME SECRETARY have any means of testing it. Information may be simply withheld, and the fact well illustrates the impotence of the present Act to check fraud, if there be any, or to reveal the whole truth as to what is done in the country.

In the month of July last your committee were called on to appear in the Court of Chancery in order to obtain a judicial decision on the interesting and important question as to whether the Society came within the definition of a charity. The late Miss CATHERINE FOVEAUX, for many years prior to her death a subscribing member of the Society, had power to dispose, by her will, of a considerable sum of money in favour of charities. Among the societies she selected were the

Victoria Street Anti-Vivisection Society and two other societies of the same nature, and she directed that £300 should go to each. Had the money been her own absolute property, she could, of course, have left it in this way, but since she had simply a power of dividing it among "charities," it became necessary to decide whether these societies fell within the description.

Mr. JUSTICE CHITTY, before whom the matter came, remarked that the question was whether the societies were charities within the technical sense in which the term charity is used in law. In determining the question of what was a charity, the Court did not enter into or pronounce any opinion upon the merits of the controversy as to vivisection. It had been held that bequests for investigating maladies of quadrupeds and birds, for promoting prosecution for cruelty to animals, for the prevention of such cruelty, for the Home for Lost Dogs, and so on, were charitable. On principle, he thought if a society for the prevention of cruelty to animals was a charitable society, it would seem to follow that an institution for the prevention of a particular form of cruelty to animals was also charitable. There also had been a decision of the VICE-CHANCELLOR OF IRELAND to the effect that legacies for the suppression of vivisection were charitable. The result appeared to be that there was a balance of judicial opinion in favour of the societies, and there was no express authority against them. Your Committee feel, as was remarked at the time, that it is obvious that any other decision would tend to throw the influence of the Courts against every moral reform the success of which depends upon an alteration of the law.

The revelation, by some leading vivisectors, of the way in which they regard experiments on living animals from the point of view of utility to the medical art, has been a remarkable event of the year, and your Committee consider it desirable to put specimens of their sentiments on record in this place, as they are in fact a reflection of the views long advocated by your Committee. Thus the notorious Dr. FERRIER, in an address before the British Medical Association at London, July-August, 1895,* said:—"It is customary to say that medicine is 'applied physiology,' and it would be very desirable if we could honestly say that this was the case. But the stock of physiological knowledge that we are able to apply effectively in the practice of medicine is infinitesimal as compared with our ignorance of the intimate nature of vital processes and the means of regulating or controlling them. While in the diagnosis, treatment, and prevention of disease we apply to the best of our power such principles as may have been scientifically evolved, or have only a foundation in empiricism, these are wholly insufficient to satisfy our requirements, and there are so many opprobria in every department of medicine that we hesitate to specify them for fear of proclaiming too loudly our poverty and impotence." These are the words of a man who has been vivisectioning animals for some twenty-three years. A member of the younger

generation of vivisectors, Dr. J. ROSE BRADFORD, has apparently come to the like conclusion. In an address to the students at University College, where he is one of the professors, on the 1st of October last, he said, amongst other matter to the same purport, "The value of physiological knowledge to the practitioner was not so great, since so much current physiological teaching ignored human physiology in its relation to medicine, and the science was taught from the standpoint of the pure physiologist." In this connection, it may also be mentioned that the *Times*, though a supporter of vivisection, nevertheless, as representing to some extent the higher intelligence of the nation, said in its issue of July 31st, *à propos* of the opening of the Medical Congress, "The remarkable advance that has undoubtedly been made in physiology, pathology, and kindred branches of science does not of itself insure a more successful application of knowledge to the immediate needs of the patient. It is quite possible to know a great deal more about the morbid changes that occur in the course of a given disease without attaining any greatly increased measure of success in its treatment. It is even more easy to mistake for increase of genuine knowledge what is merely novel and more elaborate analysis and restatement of the knowledge already possessed. . . . We thus come back to the disagreeable doubt already suggested whether the immensely extended apparatus of minute research really improves our chances of recovery."

Your Committee cannot help thinking that when vivisectors themselves and a great organ of public opinion favourable thereto come to speak of the practice in this candid and impartial way, there is good ground for hope that the time will come when the practice of Vivisection will cease, especially if the efforts of our various Societies be effectively continued.

A Memorial to the HOME SECRETARY, asking for a juster and more strict administration of the present law, pending the abolition of Vivisection, was signed by 11,477 persons and presented at the end of March. Your Committee have received an expression of the HOME SECRETARY'S views upon the merits of the case put forward in the Memorial, which shows the great difficulty there is in obtaining recognition of our just claims. The following selection of names will serve to show that the Memorial was influentially signed:—The Marquises of Bute, Worcester, and Winchester, the Marchioness of Hastings, Earl of Haddington, Earl and Countess Drogheda, Dowager Countess of Portsmouth, Countess of Camperdown, Georgiana, Countess of Seafield, Dowager Countess of Castlestuart, Viscount Sidmouth, Viscount and Viscountess Wolsley, Viscountess Combermere, The Archbishop of Tuam, The Bishops of Liverpool, Southwell, Wakefield, Glasgow and Galloway, Nottingham, and Clifton, Bishops Barry, Bromby, Cramer-Roberts, Mitchinson, and Marsden, Lady Abinger, Dowager Lady Rayleigh, Lady Mount-Temple, Lady Battersea, Lord Colville of Culross, Lord and Lady Kinnaird, Lord Robartes, Lord Coleridge, Viscount Pollington, Lord Ernest Hamilton, Rt. Hon.

* See *British Medical Journal*, November 23rd, 1895, p. 1277.

Evelyn Ashley, Lady Edith Ashley, Lady McGregor, Lady Louisa de Rothschild, Rt. Hon. Sir James Stansfeld, P.C., G.C.B., Sir R. T. Reid, M.P., Ex-Attorney-General, Sir John Gladstone, Rev. Sir George and Lady Cox, Sir Ludovic Grant, Bart., Sir Thos. and Lady Barrett-Lennard, Sir Kenneth and Lady Kemp, Sir Charles and Lady Harvey, Sir James and Lady Colquhoun, The Deans of Bristol and Glasgow, Miss Frances Power Cobbe, Mr. Birrell, M.P., Mr. Samuel Smith, M.P., Mr. James Pender, M.P., Mr. Thomas Burt, M.P., Mr. H. Seaton-Karr, M.P., Mr. George W. E. Russell, late Under-Secretary of State for the Home Department, Major the Hon. Arthur and Mrs. Henniker, Dr. Elizabeth Blackwell, Lieut.-Col. Arthur Harrington, Rev. A. Schloss (Jewish Rabbi, Nottingham), Col. C. S. French, Capt. F. D. Lugard, Mr. Wm. Watson, Mrs. Hodgson Burnett, Mr. Bret Harte, Mr. and Mrs. Thomas Hardy, Miss Rhoda Broughton, Gen. H. Towers and Col. Rayner-Wood (Manchester), Luther Holden, Esq., F.R.C.S. (Ipswich), Stephen Townesend, Esq., F.R.C.S., Rev. C. E. Neville Friederichs, Dr. W. H. Blenkinsop, Dr. Chas. Bell Taylor, Chas. Mallett, Esq., surgeon, Lieut.-Col. T. S. and Mrs. St. Clair, Major-General A. Davidson, Col. E. F. Hardy, Col. W. V. Ellis, Rev. Saml. R. Browne, M.A., LL.D., F.R.A.S., Dr. Benj. Hinde, Prebendary A. Goldney, Wm. Thos. Arnold, Esq., M.A., Herbert Philips, Esq., J.P., Mr. Alderman and Mrs. Burrows (Manchester), Dr. John Masson, J.P., and hundreds of other clergy, medical men, and laymen and women throughout the country.

Your Committee cannot omit to notice with a sense of gratification the support which their efforts to advance the Cause have received in the past year from the Society's branches and other affiliated associations. They feel strongly that the work of these auxiliaries on their own ground has been most helpful and of the highest value to the Cause at large, and they have, therefore, pleasure in acknowledging it and thanking the moving spirits of the branch and affiliated societies for it.

Your Committee have to report that about the end of last year the question of Vivisection was submitted to that interesting test of public opinion in Switzerland—the Referendum. The practical people amongst the mountains employ this system when important or delicate reforms are contemplated. In the Canton of Zürich the Grand Council was petitioned to prohibit absolutely the practice of Vivisection. The people, however, decided the question “Whether Vivisection was necessary in the carrying out of important experiments for the benefit of humanity?” in the affirmative by 39,476 votes to 17,297. The Grand Council also proposed a second question admitting the scientific value of Vivisection, but establishing the means of regulating its use for the protection of animals. This was again submitted to the people, and adopted by 35,191 votes to 19,554.

In other places abroad, just as at home, a lively activity has been maintained. A new organization,

founded by Mr. PHILIP G. PEABODY in the United States, and called the *New England Society*, has attracted a very large amount of support, while it has simultaneously stirred most deeply those who practice vivisection in Boston and Massachusetts, where its scene of action mainly lies. The result has been sharp controversy, in which much of the truth in regard to vivisection and its cruelties has been published through the valued agency of Dr. ALBERT LEFFINGWELL, Mr. P. G. PEABODY, Mr. ELLIOTT PRESTON, Mrs. WHITE of Philadelphia, and others. Your Committee feel convinced that the members of the Society will heartily join in wishing our friends across the Atlantic the fullest success.

From America also came the suggestion of an Anti-vivisection exhibit at the Paris Exhibition of 1900—Mrs. FAIRCHILD ALLEN, of Aurora, first putting it forward—and the idea has been adopted and put in train for execution, while the organisation of a Home Movable Exhibition, illustrative of Vivisection, has also been undertaken, and funds are being raised for its realisation.

In India, there has been much activity in all three Presidencies, and the translation of Miss COBBE's *Light in Dark Places*, as also of the pamphlet specially written for the purpose, has been undertaken for circulation among the native populations. Your Committee have assisted this important work—important because the pro-Vivisection party seem to be making special efforts in India—with grants in aid.

The free circulation of literature in the United Kingdom has been assiduously carried on, your Committee having, as in former years, printed and circulated many thousands of leaflets and pamphlets.

The course of the year under review has not been unmarked by the loss of several very staunch and valued supporters of the Cause, whose deaths your Committee greatly deplore. New friends arise, however, to fill the places of those who pass away, and there is no fear of the work failing for lack of supporters, though it is constantly hampered by lack of sufficient funds, and greater generosity is much to be desired. On the whole, your Committee are distinctly of opinion that the Cause has more than held its ground in a time of special difficulty, and they augur that with the maintenance of their organisation and the continuance of strenuous endeavour, it will yet be found possible, the blessing of the ALMIGHTY helping them, to attain the goal at which they are aiming.

NEW BOOKS, REPORTS, ETC.

Biological Experimentation, Its Functions and Limits, including Answers to Nine Questions submitted from the Leigh-Browne Trust. By Sir Benjamin Ward Richardson, M.D., F.R.S. London: George Bell and Sons, York Street, Covent Garden. 2s. 6d. net.

This is a book which the author in his “introduction”—wherein he discloses the frame of mind in which he approached the work of composing it—states has been on hand for some years, and the first paragraph of the Introduction will serve sufficiently to indicate the tone of it:—

“Some years ago the Council of the Leigh-Browne Trust invited me to give a clear and open reply to the nine questions stated in this little work. They knew the position in which I stood in regard to

experimentation, and preferred that one who has defended experiment should answer for it, rather than an opponent of that method of research. I have replied after the manner in which the subject now presents itself to my own mind. If I have said anything contrary to previous views expressed the reader must pardon me, for I die daily as I learn; if I have said things to him not strong enough against experimentation he must forgive me, as not being an advocate on his side, nor charged with his condemning fire."

Sir Benjamin Richardson figured as a vivisector in the *Reports of the Transactions of the British Association for the Advancement of Science* during the years 1864 to 1870. His experiments were made with various poisonous substances on frogs, pigeons, guinea-pigs, rabbits, and dogs. For the most part, also, his researches were made on anæsthetised animals. A short account of these vivisections by one of our friends expressed the hope "that he has learned to condemn in his maturer judgment the practice of his earlier years, and should win true honour by coming openly forth out of the vivisectors' ignoble ranks."

A careful study of this important work gives us good grounds for belief that the distinguished author is, to a great extent, a convert to our principles, and if he has not actually joined our ranks he has done us the signal service of proving that a scientist of the advanced guard of medicine may do so without any treachery to science, or any loss of enthusiasm in its service. Gladly as we should welcome the great apostle of sanitary science in our midst, we cannot but feel that he serves our cause by such a work as *Biological Experimentation* more efficiently in his independent position than as a professed anti-vivisectionist. In a little volume of 170 pages nine questions are propounded and answered:—Are painful experiments indispensable? Was the discovery of anæsthesia due to such experiments? Can research be carried out on painless lines? What sound methods of research as to the causes of disease and its cure can be conducted without recourse to painful experimentation? Do intellectual and moral evil result from erroneous methods of research? How best can disease be prevented? Should students be instructed by vivisectional experiments? Should the law prevent such experimentation? Could an Institute of Preventive Medicine be conducted without painful experimentation?

Such in plain English, succinctly stated, were the questions propounded to Sir Benjamin Richardson, the replies to which constitute the subject matter of his valuable treatise. It will be remarked that they not only cover the ground of the anti-vivisection crusade, but they embrace the important question—What would become of medical progress if our crusade were successful? To the question whether painful experiments are indispensable to the advancement of medical knowledge, the author says (p. 18), "I, for one, who have no special reason to find fault with the methods, dare not assert their indispensability." He acknowledges the difference of organization between man and the lower animals, and declares that in the face of so much difference as to sensibility, "experiments bearing on pain are open to the most serious error" (p. 19). "Painful experiments on the lower animals have played no indispensable part in the particular case of the discovery of anæsthesia" (p. 65). In chapter iii. lines of painless research are suggested. "The Zoological Gardens of Regent's Park beat all the physiological laboratories of the world put together" (p. 87). Let our doctors get to work to find out the causes of cold-catching and rheumatism. "Treatment," says our author, "is perfect Babel"—"two men scarcely ever write the same prescription for the same disease" (p. 109). Erroneous methods of research are, in the writer's opinion, never conducted without a feeling of compunction, a sense that there is something that is not right (p. 133). Vivisection, he says (p. 138), of "scientific pursuits is one most liable to error," and is calculated to lead to intellectual and moral evil. As a teacher of physiology, he says (p. 164), "I soon gave up experiments in my classes, not from any sentiment, but because I got on better without them." On the whole this volume is the most important contribution to the literature of our movement which has been published in recent years. It may be considered as the high-water-mark of the scientific side of our question, and whether it be looked at from the exalted position of the author, or the lucidity, candour, and earnestness of his literary method, it must be acknowledged as an epoch-making book.

We have received from Mr. Constant Stams, now the Society's Hon. Correspondent at Rotterdam, a copy of his work entitled *Over Doel en Wezen van Vivisectie*, and give him a hearty meed of praise for the compilation he has made from anti-vivisection sources for the further information of the Dutch people, amongst whom others of our corresponding members in the Netherlands have already been working for years. The book is marked by a spirit of zeal and strenuous endeavour in behalf of our cause, and for people who have hitherto been ignorant of the enormities of vivisection will be a very useful handbook.

We have also received the April number of *Anti-Vivisection* (Aurora, Illinois), which has taken on an improved form and exhibits as usual much energy and well directed zeal in the good cause. This issue is embellished with the portraits of two prominent American workers, Mrs. C. A. Meiser, of New York, and Mr. Joseph M. Greene, of Dorchester, Mass., and is interesting throughout. The May issue of the same publication is also to hand with a reproduction of one of our own pictures of the Alfort Horse Machine, and interesting contents generally as usual.—Other publications received are the *Homeopathic World* (12 Warwick Lane, E.C.); the *Vegetarian Messenger* (9, Peter Street, Manchester); the *Herald of Health* (23, Oxford Street, W.); *Our Dumb Animals* (New York); *Journal of Zoophily* (Philadelphia); and the *27th Annual Report of the Women's Branch of Pennsylvania Society for the Prevention of Cruelty to Animals*.

MR. LAWSON TAIT ON THE LISTERIAN SYSTEM OF SURGERY.

The following important letter having been declined by the Editor of *Nature*, we have pleasure in giving it publicity:—

SIR,—I trust you will permit me, as one who has had a vast experience in practical surgery during the last thirty years, to enter a protest against the conclusions pronounced by Professor Tillmans, and particularly against the superlative terms on which he lays his claim.

I have no desire whatever to depreciate the merits of Sir Joseph Lister, but that either his theories or his practices have had the impression on practical surgery, as asserted by Professor Tillmans, is simply contradicted by the fact that those of us who have laughed at their arguments and brushed aside their details have had better results than the followers of Lister.

Professor Tillmans goes back for thirty years and compares what was the fact then and what we see now, and he claims results for the inventions of Lister for which many other factors are to be credited.

He says quite truly that the introduction of anæsthetics gave a new life to surgery. It enabled us to undertake a vast amount of work which was quite impossible without it. After this work was undertaken it dawned upon the genius of Simpson to inquire why death wasted so much of it. He found that the condition of the patients was chiefly responsible—mainly brought about by overcrowding.

Then started two schools, one devoting their attention to the morbid influence of germs and their destruction by chemical methods; the other devoting themselves to the conditions of the soil upon which the germs grew, that is, the human body.

Thousands, myriads of the most useless experiments on animals were made by the first school, under the mistaken idea that the reactions of disease in animals are in any way analogous to those in men. Those experiments have been checked and ought to be abolished entirely, so far as surgical research is concerned, merely on the ground of their persistently misleading character—if on no other.

The second school set to work to investigate the causes of death after operations, and found that they were mainly due to defects in the hospital and personal to the surgeon.

In this way Listerism has become fashionable as a loophole of escape when criticism was directed against the unsatisfactory results of surgical work. This has been notably the case in the history of ovariectomy.

The main improvements are due to reconstruction of our hospitals and the introduction of rigid cleanliness. Until six or seven years ago Listerism meant chemical destruction of

supposed germs; now Professor Tillmans tells us it means cleanliness! But we did not need Lister and his followers to tell us that, twenty-five years after Simpson had proclaimed it on the surgical house tops. The days of chemical germicides are over, and with that Listerism is dead. We are now going back to the common sense of James Young Simpson. Remembering as I do German hospitals thirty years ago, and contrasting them as they may be seen now—as at Hamburg—with all the difference between pig-styes and palaces, I am not surprised that with German surgeons there is much confusion of mind as to the reasoning on this subject. I am not surprised that they should wish to forget the old style of work and fly to any supposed discovery to trick the awful picture seen in the contrast. If the improvements in hospitals, in general cleanliness, particularly in the cleanliness of instruments and hands, had gone on as they have done, Lister and his antiseptic doctrines might have been treated as a negligible quantity, just as all his details of methods, one after the other, have been found ineffectual—each after inordinate praise for a few months—and now they are consigned to the cellars.—I am, etc.,

LAWSON TAIT.

Birmingham, May 8th, 1896.

FOREIGN INTELLIGENCE.

THE NETHERLANDS.

We have received from Madame Van der Hucht, one of the Society's valued honorary correspondents in Holland, some extracts from a work, by Professor Einthoven, entitled, "Researches made at the Physiological Laboratory of the Leyden University." These extracts describe in detail experiments of an atrocious character made in regard to the respiration upon the chests of dogs. It has been the custom of the medical profession in Holland to state that the amount of vivisection in the country is insignificant, but this work proves the contrary. It is one of two series, the first of which consisted of six volumes, and of the second of which five have been issued, all containing records of experimental researches on animals. We have learnt with regret that the protestations of medical men in the Netherlands are unreliable, and that there, as elsewhere, the coward science of vivisection is only too industriously pursued.

ITALY.

The (English) report of the Royal Society for Protection of Animals in Florence for 1895 has just been issued by the Hon. Secretary, Countess Baldelli. The venerable lady, now, we believe, in her eighty-second year, retains all her vigour and intense interest in the cause of the hapless animals, but, in summing up, as she does in a masterly way, the results of twenty-three years of incessant labour, she is compelled to make the sorrowful avowal that "if success had been proportionate to the tenacity of our efforts, things would now be on a very different footing" in Florence. She recalls how "Our commencement promised much; La Marmora, Ricasoli and the Syndic Peruzzi were honorary members of our Society, and favoured our undertaking; Lord Shaftesbury and other good and great men in England interviewed Peruzzi when he visited London, and gave weight to what was sneered at by many as a puerile and absurdly sentimental thing. The King and Queen of Italy and good Queen Victoria accepted the honorary patronage of the Florence Society, and our English friends came to our help with generous subscriptions." After a tribute to the continued liberality of English residents and visitors at Florence, Countess Baldelli proceeds to give a mournful but extremely valuable *résumé* of the history of the contest of her Society with the vivisectors, which we desire to place on record in our pages. She says:—

"During the life of our valuable patrons, the Society obtained permission to build a lethal chamber close to the Dog Deposit (situated in the shambles), and provide for its expense, in order to ensure for the poor dogs taken up by the police a peaceful death. I will not uselessly harrow my reader's feelings by describing how they were destroyed before we introduced this change. What we could not do, was to prevent

a portion of them being given to the vivisectors under the pretence of Science. Schiff then reigned over the laboratory in Florence. The Syndic had given him one of the most desirable palaces and garden in the Via San Sebastiano, opposite Gino Capponi's residence. It was well furnished with cellars, operating rooms, and everything these torture chambers require. Soon the cries of the victims began to disturb the neighbours; protests were made, a deputation from our Society visited *unannounced* the laboratory, and described the horrors witnessed. Enquiries were made, and the number of dogs alone Schiff exacted from those the police collected was almost incredible. Protests and petitions to the Syndic increased, and Peruzzi at last told Schiff he could not have more than six a week given to him. This he resented, and threatened to leave Florence, which he eventually did, to the great satisfaction of many. Of course he was succeeded by another vivisector, and the laboratory is continually at work, though the results are no longer paraded in the newspapers as they used to be. After all our difficulties and emotions, our satisfaction was great when Prince Corsini, being elected Syndic, gave the direction of the Dogs' Deposit (or rather pound) to our Society. We were to have it for three years, to be reconfirmed subsequently if agreed on. We immediately gave the poor dogs dry wooden boards to lie on in their wet stone cells, where they were chained for three days before disposed of, and we saw that their bread was not mixed with chalk for the advantage of the purveyors. After three days, if not reclaimed (an expensive thing), they were asphyxiated with the fumes of charcoal. As to their cession to the laboratories, of course that was all at an end now. We had the direction of the creatures, and our anxieties on that score were at an end. The three years, however, came to an end, and a new Syndic, Marchese Torrigiani, succeeded Prince Corsini, who retired, and without any previous notice the Society was rudely desired to relinquish the direction of the dogs' pound and 'clear out!' (it must have been pleasant to our opposing Professors to use this rude phrase!). The Florentine Society did everything possible, aided by powerful English friends, to keep or regain the protection of the condemned creatures, but without success."

The other and more general work of Countess Baldelli's Society in introducing Bruneau's mask, stopping the plucking of living fowl, and destruction of small birds is reported, but scarcely more hopefully. The aged lady remarks, sorrowfully, "A cruel and inconsiderate treatment of all birds in Italy, even to the probable extinction of many useful varieties, is painful to witness. . . . The rural villages and small towns rejoice in barbarous games in which live creatures are the victims. If the gentry and Syndics of these places do not think it worth while to interfere, barbarous customs will not cease. I believe more has been done in Florence than elsewhere in this beautiful peninsula; but there is *very much* to be done still here and more elsewhere." The revenue of the Florence Society last year was 6,627 francs—about £264.

GERMANY.

THE DRESDEN ANTI-VIVISECTION SOCIETY.

We are pleased to learn from the annual report, just received, that the Dresden International Anti-Vivisection Society still continues to make substantial progress. Eighty-one new members joined during the year, leaving a net gain of nineteen members after deducting the losses caused by death and other causes. The death-roll was indeed a heavy one, numbering no less than thirty-one. The affiliated societies increased from fifteen with 8,000 members to twenty-five with 13,000 members. The budget is a healthy one, showing a fair excess of income over expenditure. Among the books and pamphlets distributed, two translations from the English take the lead, viz. Dr. Anna Kingsford's *Unscientific Science*, and Mr. Lawson Tait's *Uselessness of Vivisection*. No fewer than 24,500 copies of one leaflet were distributed. It is evident, therefore, that although the Society does not consider the time opportune for further parliamentary agitation, it is gathering strength for a renewed attack as soon as the word shall be given; and the mere act of gathering strength is excellent work in itself.

The Victoria Street and International Anti-Vivisection Society.

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SPECIAL SUPPLEMENT TO THE ZOO PHILIST.

LONDON, JUNE 1, 1896.

THE VICTORIA STREET AND INTERNATIONAL ANTI-VIVISECTION SOCIETY.

TWENTY-FIRST ANNIVERSARY.

SPEECHES BY MR. G. W. E. RUSSELL, THE RIGHT HON. LORD COLERIDGE, Q.C., THE RIGHT REV. BISHOP BARRY, MR. J. SWIFT MACNEILL, M.P., MRS. FENWICK MILLER, MRS. JAMES PENDER, DR. BERDOE, REV. THEODORE HITCHENS, B.A., MR. G. M. SAVILE, MR. PHILIP SERLE, MR. H. S. WOOD, AND MR. H. N. FERRERS.

The twenty-first anniversary of the Victoria Street Society was celebrated by the holding of two meetings at St. Martin's Town Hall, London, on Wednesday, May 13th. Both were attended by large audiences; indeed, the proportions of the smaller hall, which had been retained for the annual meeting of the Society, proved too narrow for all those who wished to be present, and there was great difficulty in accommodating late comers. The evening meeting, open to the public, was held in the larger hall, which, in its turn, proved none too spacious, the result being one of the best meetings ever held in furtherance of the cause, all classes being represented, and apparently greatly interested. Among those attending the day's proceedings were:—Miss Auldjo, Sir Arthur and Lady Arnold, Miss A. Barton, Dr. Beale, Mr. and Mrs. Ernest Bell, Col. and Mrs. Benson, Dr. Blenkinsopp, Mr. J. T. Bigge, Col. Bolland and friends, Mr. C. R. Brettell, Miss Rhoda Broughton, Dr. Ralph Browne, Miss Woolcott Browne, Mrs. Bryan, Miss Burnham, Mrs. Mona Caird, the Countess of Camperdown, Miss Carnsew, Mr. P. N. Chakraborty (The *Atmik*), Miss Annie Chapman, the Hon. Stephen and Mrs. Coleridge, Mr. J. Collinson, Mr. C. M. Coombe and friends, Mrs. Cochran and friends, Rev. A. H. Cunningham (Reading), Mrs. Cuthbert, Miss C. Cutler, the Misses M. A. and S. B. Daubeny, Miss Hayman Dod, Miss Drew, the Ven. Archdeacon and Miss Dunbar, Mr. and Mrs. J. Passmore Edwards, Miss Elliott, Miss E. Etlinger, Miss Fergusson-Abbott and friends, Miss Annie Goff, Miss M. Gordon, Lady Goring, Miss Granger, Madame Annabel Gray, Mrs. H. A. Hadden, Mr. and Mrs. Hall, Mr. Henry T. Hamilton, Miss Hill, Dr. Frances Hoggan, Mrs. Luther Holden, Nurse Hopper, Mrs. E. M. James, Mr. E. W. Jaquet, Mrs. Johnson, Mrs. Lamdeln, the Misses Law, Mrs. Henry and Miss Lee, Rev. Dr. Lee, Mrs. Lemon and friends, Miss Lislie, Miss Looker, Miss Lister, Mr. M. J. MacCarthy, Capt. Macdonald, Miss Charlotte McCarthy, Mrs. McKinnell and friends, Mrs. Charles Mallet, Miss Mayhew, Miss Maudslay, Miss Mayo, Signor Milo, the Misses Mortimore, Mrs. T. R. Monro, Miss S. S. Monro, Mr. C. S. Overy, Miss Packham, Mrs. Paisley (representing Manchester Anti-Vivisection Society), Mr. C. W. Pell, Miss Pilbrow, Capt. Quintanilha, Miss E. Watts Phillips, Mrs. Lloyd Price, Miss E. Elcum Rees, Mr. G. E. Richardson, Mr. Frank Rinder, Rev. F. S. and Mrs. Ross, Mr. M. A. Rundell, Mr. H. S. Salt, Mrs. Sant, Mrs. E. Scott and friends, Mr. C. Newton Scott, Miss Sibley, Mr. and Mrs. H. J. Snow, Lady Stepney, Rev. Jos. Stratton, M.A., Gen. Stunnis, Miss Swifte, Mr. A. C. Swinton, Miss Evelyn Sanders, Miss S. L. Tacey, Mrs. Tawke, Miss Hugon-Taylor (Exmouth), Surgeon-Gen. Thornton, C.B., Capt. Henry Toynbee, Mr. and Mrs. S. G. Trist, Miss Volckman, Miss Abney Walker, Col. and Mrs. Walker, Mr. F. H. Walker, Mrs. Thomas

Walker, Miss Warlow, Mrs. Eleanor Watt, Sir William Wedderburn, Bart., M.P., Mr. A. Westcott, Miss F. E. White, Miss C. Whitehead and friends, Mrs. Russell Wing, Mr. T. A. Williams (Bristol Anti-Vivisection Society), Miss Violet Wood, Miss Yaldwyn and friends, Miss Dora Yardley.

The annual meeting of the Society was held in the afternoon, the smaller hall being crowded. Mr. George W. E. Russell (ex-Under Secretary of State for the Home Department) presided, and was supported on the platform by Mr. John F. Norris, Q.C., Mr. R. J. Lloyd Price, J.P., Rev. Theodore Hitchens, B.A., Mr. Ernest Bell, M.A., Dr. Berdoe, Capt. F. E. Pirkis, R.N., Mr. Philip Serle and Mr. G. M. Savill (Paris), Mrs. James Pender, Mr. H. N. Ferrers, Rev. John Baird (Scottish Society, Edinburgh), and Mr. Benjamin Bryan, Secretary.

The SECRETARY intimated the receipt of excuses for non-attendance from the Earl of Strafford, Sir Robt. T. Reid, Q.C., M.P. (ex-Attorney-General), the Right Hon. Evelyn Ashley, P.C., the Right Hon. Sir James Stansfeld, P.C., the Rev. Sir George Cox, Bart., the Right Rev. Bishop Mitchinson, Mr. Thomas Burt, M.P., Mr. T. Gibson Bowles, M.P., Mr. J. E. Ellis, M.P., Canon Wilberforce, Canon Bellairs, Baron Ernst von Weber (Dresden), Dr. Hubert Böens (Charleroi), Dr. Paul Förster (member of the German Reichstag), Miss Betham-Edwards, Miss C. A. Gladstone, Mr. William Adlam, J.P., Col. Bethune, Col. Williams, Herr Emil Weilschauer (Oppeln), Madame von Schilling (Riga), Herr Constant Stams (Rotterdam), Rev. H. N. Bernard, Mr. William Dunn (Exmouth), Mrs. Deane Morgan, Rev. J. S. Walker, M.A. (Cheltenham), Miss J. E. Watson, Mr. E. C. V. Lloyd, Mrs. Carson, Mrs. Roscoe (Westbury-on-Trim), Mrs. Caldwell (Bray), Miss M. L. Backhouse (York), Miss A. Moorhouse (Leeds), Miss E. F. Evans (Bedminster), Mrs. F. L. Hesse (Wrington), Mrs. Bell (Fulham), Mr. T. B. Clark (Birmingham), Mrs. Massingberd (Pioneer A.V. Society), Mrs. Henry Richardson (York), Mr. T. H. Ashton (Birmingham), Miss Peacock (Edinburgh).

The following cablegrams of congratulation were received:—

"RIGA.—Hearty congratulations on your twenty-first anniversary. (Madame) DAMENCOMITE SCHILLING."

"STUTTGART.—The Stuttgart Branch Society sends best wishes to the twenty-first anniversary, and at the same time thanks to the illustrious founders and to all brave pioneers of the good cause."

The CHAIRMAN, in opening the proceedings, urged the importance of securing new blood for the Society's operations, because, as time went on, it was bound to lose many of those who were leaders and guides in the movement. On this the twenty-first anniversary of the formation of this Society, he continued, I could not forget under whose auspices the movement began, and who led it during those

earlier years: respectful, admiring, and loving commemoration should be made of Lord Shaftesbury, of Lord Mount Temple, and of Lord Coleridge. (Cheers.) Fortunately, in each of these cases the name is perpetuated in connection with this work. The late Lord Coleridge is now represented by his successor in the title, Lord Shaftesbury by his sons and daughters, and Lord Mount Temple by Lady Mount Temple. (Cheers.) It may be said that the movement is not making such satisfactory progress with the public as could be desired. It meets with considerable opposition in the public press, and, of course, from the bulk of the medical profession. The public mind has become imbued with the notion, first, that the tortures of animals, against which the Society protests, are trivial in amount and degree; and, secondly, that whatever they are they are justified by proved benefits to humanity resulting from them. Under these circumstances it is essential not merely to rely upon appeals to the emotions, or even to moral sentiment, but to grapple with the scientific and physiological facts involved, and endeavour to enlist the support of the intelligent and intellectual people who at present are ranged on the opposite side. In the present state of public opinion it is obvious that Parliament, which after all can only express the general sentiment of the community, cannot be expected to help in the abolition or even the further restriction of vivisection. Nevertheless, there is a great deal that can be done, without recourse to Parliament, by administrative action under the present Act, and there is hope of help from some members of the present Government. Mr. Balfour, unfortunately, is an upholder of vivisection; but Mr. Chaplin is known to be strongly on our side; he is a man universally respected by his opponents as well as his own party, but, unfortunately, he is not Home Secretary. The control of vivisection is in the hands of the Home Secretary. Whatever Sir Matthew White Ridley's sentiments on this question may be, it is certain that he is a man of a naturally humane, tender, and compassionate disposition, with a fair and open mind, and a man not likely to be led away by sophistical arguments. It is hardly to be expected that the Home Secretary will exercise the power which he technically has under the Act to abolish vivisection by refusing all licenses, but the Home Secretary can do much for the mitigation of the sufferings involved in vivisection. The whole system of inspection, not only in this matter, but others in which public inspection is supposed to exist, is rotten and illusory. (Cheers.) The existence of an inefficient inspectorate is really much worse than having no sort of inspection at all, because it lulls the public conscience. I have nothing to say against the gentleman who now holds the office of inspector, but it is obvious that that gentleman is ridiculously overburdened. As one practical step, then, we might appeal to the Home Secretary to ensure a better and more adequate system of inspection than at present exists. Another thing that might be done is to endeavour to check the further advance of the vivisectioning spirit. That is entering upon rather dangerous ground, because the professors and amateurs and practitioners of vivisection are amongst the most intolerant and imperious of mankind, and anyone who breathes the slightest word against their claims or practices runs the risk of incurring all manner of terrible penalties. The last time I spoke on a platform of this Society it was on an occasion when I had the honour of championing Miss Frances Power Cobbe—(cheers)—against an unmannerly attack by a gentleman who shall be nameless, and I was threatened with an action for libel. Such is the *lèse majesté* of these great professors of a cruel science. It is necessary to speak very cautiously when discussing the pretensions of these apostles of surgical science. During the last six or eight years I have seen a great deal of the working of our great hospitals, and the conviction is deepening upon my mind that what we have all along said was likely to grow out of animal vivisection has actually come to pass, and that there is a growing belief, in the public mind, and particularly in the mind of the poor, that human vivisection is practised in our hospitals. By human vivisection I mean the infliction of very serious surgical operations, not with the view to saving life or relieving the suffering of the patient, but with the view of increasing knowledge of disease, or (even an extremer case still) of demonstrating and illustrating knowledge already and

by other means acquired. I am careful to say that I do not state, as of my own knowledge that human vivisection is practised, but what I do know is that a dreadful misgiving upon the subject is growing up in the minds of those from whom hospital patients are drawn, and amongst the supporters of hospitals from whom their material sources are derived; and that I am not in a position to say that that misgiving is altogether without foundation. I do not suggest that the remedy for this state of things, if it exists, is that we should withdraw our support from hospitals; rather, we should, if possible, subscribe more largely than ever, so as to acquire some share in the government of the hospitals, with a view to electing governors who will see that no such abominable practices are allowed. Another thing I would urge is the promotion of the lay control of hospitals. The tendency now on the part of the medical, and more particularly of the surgical staff of hospitals, is to get the government of those institutions into their own hands, and to reduce the Board of Management to the mere position of keepers of the purse. Unless you wish these tyrannies of science, falsely so called, to be strengthened and perpetuated, and increased tenfold, it behoves those who by their money keep the hospitals going to retain the control of them in their own hands. Part of your business at the present moment is to do what you could to withstand the further advance of what may be called the surgical spirit in this country, or the pseudo-scientific spirit working through torture. I am happy to learn that the movement for a Pasteur Institute in London has not made great progress, but I have been asked to call attention to a humane rival to the Pasteur Institute, namely, the London Buisson Institute, founded by a gentleman with whom you are all familiar, Mr. Pirkis. (Cheers.) That is an experiment which, to say the least of it, deserves careful watching, and out of which it is not unlikely that there may be developed a system of rational and humane treatment of the terrible disease of hydrophobia, which will save human life without the awful outlay of undeserved suffering which at present is expended on innocent animals. (Cheers.) In conclusion, the Chairman quoted a saying of Mr. Fox which has passed into the common language of politics, that "what is morally wrong cannot be politically right." Transferring that aphorism from the region of politics to the region of science, we who believe that God is the author alike of the moral order as well of the natural order, are justified in believing that "what is morally wrong cannot be physiologically right." (Cheers.)

The SECRETARY (Mr. Benjamin Bryan) explained the annual report, which appears *in extenso* in the present number of the *Zoophilist*, and read the list of the committee to be re-appointed, as follows:—Mrs. Adlam, Sir Arthur Arnold, Lady Arnold, Rev. J. P. Bacon-Phillips, Ernest Bell, Esq., M.A., Colonel S. M. Benson, Mrs. Benson, Edward Berdoe, Esq., L.R.C.P., Miss Rhoda Broughton, Miss Olive Bryant, the Countess of Camperdown, John H. Clarke, Esq., M.D., Hon. Stephen Coleridge, Hon. Mrs. Arthur Henniker, Mrs. E. M. James, Mrs. Leicester, W. S. Lilly, Esq., LL.M., Miss S. S. Monro, Mrs. Frank Morrison, John F. Norris, Esq., Q.C., Mrs. James Pender, F. E. Pirkis, Esq., R.N., F.R.G.S., Mrs. Lloyd Price, Lester Reed, Esq., F.C.S., F.I.C., Miss Ellen E. Rees, George W. E. Russell, Esq., Mark Thornhill, Esq., Dep. Surg.-Gen. Thornton, C.B., Mrs. Robie Uniacke, Mrs. Arthur J. Walter.

Mr. G. M. SAVILE, in moving "That the annual report be adopted, printed, and circulated, and the Executive Committee re-appointed," said the report contained an immense amount of material for leisurely and continued study, as well as for encouragement to further energetic and untiring efforts. He urged the importance of systematic perseverance in the agitation. They might hear to-day of iniquities perpetrated in our very midst, such as perhaps a generation ago had hardly been conceived by mortal mind, and it would be no use murmuring "painful disclosures," "shocking revelations," and then shelving the subject. Barren "good intentions" would not forward the movement; they might serve to pave the downward path of the vivisectionist, but in this cause what was required was deliberate, calculated, sustained, and strenuous action on definite lines towards a well-marked issue. Members of the society should first of all inform them-

selves of the A B C of this great question in both its positive and its negative aspects; not content with knowing in a general way that vivisection performed acts of unspeakable horror, they should in some measure learn what those acts really were. They must not expect to find among the vivisectioning party the usually accepted standards of right and wrong which ordinary consciences approved. The principle that a worthy object justified wicked means might tend, not only to turn a man into a fiend towards creatures lower in the scale of life, but also to play havoc with his moral relations to his fellows. Having equipped themselves with weapons of incontrovertible fact, let them take all reasonable opportunities of bringing up the subject. And in making any charge, let them be prepared to give chapter and verse to substantiate it. For this purpose the literature of the society, which might be had for the asking, would prove invaluable. This was a case for no barren sentiment, no idle stirring up of a passing feeling, but for earnest thought, indignant plain speaking, uncompromising action. In dealing with vivisection, he would urge that they should be regarded as outside the pale of ordinary social intercourse, and in cases where the professional aid of medical men was required, the character of the gentlemen called in should be carefully considered. (Cheers.)

Mrs. JAMES PENDER seconded the resolution. She remarked that they must all deplore the great indifference which the public showed, in spite of the efforts of this society, in the horrid cruelties of vivisection. Partly this was due to the dislike which anti-vivisectionists felt at pushing forward their views, for truly this was a hateful subject to talk upon; but it was really moral cowardice to shrink from mental pain when it might be the means of saving some of God's creatures bodily pain. (Cheers.) It was difficult to get the public to believe that medical men were guilty of these atrocities. She would give one instance that had recently come to her knowledge. A celebrated scientist and specialist was employed in what he called a very difficult and delicate experiment—in other words it was some cruel torture involving the brains and the nerves of some living thing. At the crucial moment, just when the discovery was at hand, the animal had the unheard-of insolence to die. Then the doctor called to him a little dog, which was a pet of his young children, and actually did not hesitate to sacrifice this little creature, dear as it was to his wife and children. Mrs. Pender urged that members of the society should refuse to have anything to do with or to call in the assistance of any medical man who had any connection with vivisection. If they could only succeed in making the vivisection a sort of moral leper, viewed with the horror which in the old days the torturer and the executioner were regarded, they would have struck the final blow which would help them to pull down this horrible edifice of cruelty and atrocity which was a disgrace to modern civilization and Christianity. (Cheers.)

The Rev. T. HITCHENS supported the resolution. He was not inclined to agree with the chairman in taking a downcast view of the prospects of this cause. Of course, in proportion to the strength and earnestness of his convictions, a man would feel the slow progress, comparatively speaking, which a righteous cause made. But the anti-vivisection movement was merely following the course of all great religious, social, and moral movements in the history of the world; at first in an insignificant minority, it eventually, if in keeping with the teaching of Christianity, must accomplish its object. What was now required was more zeal, more fire, more enthusiasm. Vivisection had been known for hundreds of years to be practised, if not in this country, abroad; but it was during this present nineteenth century, in this materialistic age, that a great impulse had been given to the vivisection movement, and during the last twenty-five years, in spite of the Act, there had been an immense increase in the experiments performed. The effort to establish a Pasteur Institute in this country had, happily, failed, but the new "Institute of Preventive Medicine" was rapidly approaching completion, and it would be for this society to see that vivisection was not carried on there. Of the many grounds on which they impeached the practice of vivisection, the moral argument was the strongest. Of course, there was a claim that knowledge was obtained in this way, but, knowing that goodness of character is far greater than any amount of knowledge, rather than have certain forms

of knowledge they would sacrifice them in the interest of character, and in order to keep their consciences clear in the sight of God and man. A great deal could be done to educate the public upon this question, by the distribution of the literature published by the society. Especial efforts should be made to educate the younger generation. And above all, let them not forget to wait upon God in prayer; with His blessing the success of the movement was assured. (Cheers.)

Mr. PHILIP SERLE (representing the *Société Française contre la Vivisection*) gave an interesting account of the French Society, which was established about thirteen years ago, under the auspices of the Victoria Street Society. So far, no very great progress had been made, the difficulty of arousing public opinion in France upon a matter of this kind being enormous, and when protective enactments were made there was no certainty that they would be put into force. Some years ago a bye-law was made that there should not be more than four or five operations upon the same animal at the Alfort Veterinary School, but nobody took pains to see that the bye-law was carried out. On their visit to Alfort last year, Messrs. Peabody and Baudry found that some sixty or sixty-four operations were performed upon the same unfortunate beast, who was tortured in every conceivable way, till he was left a mangled mass of flesh. The French Society considered what steps could be taken in this matter, but unfortunately in that country foreign evidence had very little weight. It was intended, however, to bring the matter before the present Minister of Agriculture, and it was hoped that an official inquiry would be set on foot. One thing the French Society had done; they had prevented public vivisections in France. (Cheers.) The Committee of the Paris Society had deputed him to express their cordial feeling of sympathy with the English Society and their hope that the two societies might continue on the footing of brotherhood. (Cheers.)

The resolution was carried unanimously.

Dr. BERDOE moved, "That the members and friends of this Society in annual meeting assembled desire to place on record their conviction that further experience and wider knowledge of the evidence with regard to vivisection indubitably show that, from any point of view, the practice is unjustifiable and ought to be prohibited." After congratulating the society on attaining its majority (as this was the twenty-first annual meeting), Dr. Berdoe strongly contested the rather gloomy view of the outlook taken by the Chairman. If the Society's efforts had not resulted yet in the stamping out of vivisection, they had at least laid a solid foundation in educating the public mind, and it was impossible that the movement could be stopped until the whole base business had been swept away. (Cheers.) The work of the society was largely educational. Twenty-five years ago he was present at a conversation given by one of the scientific societies, and part of the amusement provided consisted in a professor cutting up a rabbit alive. Such a thing as that would now be impossible. Another incident he remembered at one of the hospitals was that a professor, in illustrating a question about muscular contractility, took a rabbit, which was there for other purposes, and twisted its tail off, just to show a class of students, what even non-professional persons know, that a muscle suddenly divided would contract. That again would not now be tolerated. Ten years ago this movement was treated with contempt, but now the vivisectionists themselves saw that there was something to argue about. In a book recently published by Sir Benjamin Ward Richardson (who had himself been a vivisectionist), entitled "Biological Experimentation," nine-tenths of the case against vivisection was conceded. The author admitted "that experiments on animals are not indispensable for the advancement of medicine." He acknowledged the difference that exists between the organism of man and that of animals, and that that led to very contradictory results in experiments; that "pain always leads to error and obscures the natural functions;" he contradicted the assertion that experiments on animals had anything to do with the discovery of anaesthetics; he suggested many lines of painless research; with a great deal of irony and sarcasm he suggested that medical men, when they had been liberated from the work of the physiologist's room, might be able to turn their attention to the discovery of the cause of colds and rheumatism; he asserted that medical treatment at present is a perfect Babel, that no two doctors

prescribed the same remedy for the same disease. The only thing Sir B. W. Richardson claimed as having been very much advanced by experiments on animals was the discovery of nitrite of amyl, but, after all, nitrite of amyl was not nearly so valuable a remedy as Sir B. W. Richardson (who discovered its properties) claimed it to be. However, to get such concessions as these from a vivisector of high authority was a great step in advance. (Applause.) Another thing that had been done by the society was, it had brought about an inquiry among theologians whether or not animals had any rights. It was difficult to see how the proposition that they had no rights could be maintained in face of the fact that in the ninth chapter of Genesis, the rainbow was made the sign of God's covenant, not with man alone, but "with every living creature that is with you, of the fowl, of the cattle, and of every beast of the earth with you, from all that go out of the ark, to every beast of the earth." After that, it was absurd to say that animals were no more in the sight of God than sticks and stones. (Cheers.) There could be no doubt that much educated public feeling was veering round to the side of anti-vivisection. Though the press generally was against it, and the vast majority of medical men, at any rate officially, a kinder and more generous feeling was awakening, which before long would prove to members of this Society that their work had made considerably more progress than some were inclined pessimistically to think. (Cheers.)

Mr. H. N. FERRERS, in seconding the resolution, said that if he had been dealing with an abstract and not a practical subject he should have been inclined to go in for the regulation rather than the total prohibition of vivisection. But seeing that regulation and restriction had been tried and found to be unsuccessful, he thought they were justified in going in now for absolute prohibition. (Cheers.) Experiments upon animals were absolutely useless as a guide to the treatment of human beings, while they tended to case-harden and coarsen those who made them. He did not wish to say anything against the medical profession as a body, but there was undoubtedly growing up amongst the poor a fear that iniquitous practices were carried on in the hospitals, and this fear alone would justify the existence of the Victoria Street Society. It was said that vivisection was essential in the interests of science and in the pursuit of knowledge, and the vivisectors contended that they had as much right to make these experiments as an astronomer had to watch the courses of the stars. He was not in a position to say whether or not knowledge could be gained from vivisection, but he did say that knowledge so gained had no right to be gained. (Cheers.) There were other and greater interests than those of science—particularly of a science which enslaved and brutalized its votaries; and they appealed against the science which required the doing of such things, to the much more important interests of mercy and justice. (Cheers.)

Mr. R. S. WOOD supported the resolution. This was the twenty-first anniversary of the birth of this society; that day it emerged from childhood and assumed the *toga virilis* of manhood. The vitality which it had shown during childhood was an earnest of increased power during manhood; and he was convinced that the society would become more than ever a force and a power in this country which practical statesmen would have to take very seriously into consideration. He would not wish the society "many happy returns of the day" because he trusted that its efforts would very soon be crowned with success, and that an Act would be passed totally prohibiting this vile business. (Cheers.) He was happy to see that the cause now had several supporters in the press. Mr. James Payn, in the delightful column "Our Note-Book," which he contributed weekly to the *Illustrated London News*, recently wrote, "Though I myself would give everything for health, God forbid that I should consent to the torture of animals, even if I were certain that health was thereby assured me." He would give only one reason why he opposed vivisection—because it seemed to him that it was opposed to the very first principles of Christian ethics. (Cheers.) Vivisection had for its motto, "the greatest good of the greatest number," whereas Christianity had for its motto, "Love is the fulfilment of the law." If the vivisection motto were carried to its logical outcome it would do away with hospitals

altogether; instead of trying to remedy disease, the weak, and the sick, and the afflicted would be left to slink into a corner and die, uncared for and unloved. That would be purchasing a finer race, and promoting the survival of the fittest, but at much too big a price—the price of deadening all those humane sentiments which made man superior to the animals. When it was said that the dumb animals were no more in the sight of God than sticks or stones, he recalled the fact that St. Francis of Assisi loved to call the animal creation "his little brothers and sisters." It was a great Jesuit divine who said that our Lord was born in a manger between sheep and oxen so that He might be shown to be the Saviour of beasts as well as of man. True, anti-vivisectionists were derided as sickly sentimentalists and fanatical faddists, and the brave ladies who supported the cause were spoken of as belonging to the "shrieking sisterhood," but they could afford to despise such abuse. (Cheers.) The cry of the tortured animals would assuredly rise up to heaven—

"Never a sigh of sorrow or of pity,
Never a cry for insult and for wrong,
Hath not its archive in the angel's city,
Finds not its echo in the angel's song,"

and he believed that vengeance would come upon this country in exact proportion as we tolerated this vice. There was no ground for discouragement at the progress the movement had made during the existence of the society. If the progress seemed slow, let that only stimulate them to renewed exertion in the cause; let them strive to bring about the total abolition of vivisection; and he believed that, by so doing, they would hand down to their children an England greater than to-day—greater because she would have become more humane, greater because she would have become free from the trammels of a sophistical science, and greater, above all, in that she would have learned the grand lesson that the greatness of a nation consists not so much in the extent of the territory over which it bears imperial sway, but far more in the character she develops in those whom she calls her sons. (Cheers.)

The resolution was carried unanimously.

Mr. ERNEST BELL, M.A., moved a vote of thanks to the chairman and the speakers. This was seconded by Captain TOYNBEE and carried by acclamation. The CHAIRMAN having briefly responded, the meeting terminated.

THE EVENING MEETING.

The public meeting held in the evening was largely attended. Lord Coleridge, Q.C., occupied the chair, and on the platform were Bishop Barry, the Hon. Stephen and Mrs. Coleridge, Mr. Swift Macneill, M.P., Dr. Berdoe, Mrs. Jas. Pender, Mrs. Fenwick Miller, the Rev. John Baird (of Edinburgh), Dr. J. H. and Mrs. Clarke, Mr. Ernest Bell, M.A., Mr. R. S. Wood, M.A., Mr. Philip Serle (from Paris), Mr. J. Passmore Edwards, and the Rev. Theodore Hitchens, M.A.

The CHAIRMAN, in opening the proceedings, said: Ladies and Gentlemen,—It is usual, I believe, for public meetings to be presided over by a chairman, and it is also usual, I believe, for that chairman to introduce the speakers and to preface what passes at the meeting by a few words of his own. Now this meeting has been called together to emphasize a fact in the history of the Society which we represent, and that is that it has now continued for twenty-one years to do the work for which it originally started, and therefore this is the coming of age, so to speak, of the Society. What was the object of the starting of this Society? You know the particular object. The particular object was the restriction of what those who started it considered to be a particular form of cruelty towards animals, but it is part and parcel of a larger warfare that is being conducted, and has been conducted for the last twenty-one years. We only represent one wing, so to speak, of that army which is ever mustering in larger and larger numbers, and which is waging war upon cruelty of all sorts, believing that man, as man, ought to exhibit in his conduct towards the dumb creation that humanity upon which he so prides himself. (Cheers.) This is more or less a feeling of recent growth. If we study our histories and read the history of mankind, the history of nations, we shall see that there were times when cruelty was little regarded as cruelty, and when men did not

consider that they had any duties of humanity even towards their fellow men. The most refined and scholarly citizens of Greece and Rome were guilty of cruelties towards their fellow men which every one of us, good, bad and indifferent, high or low, rich and poor, would start back from with abhorrence. This state of things lasted, in one particular instance, even down to our day. I daresay many of you were alive at the time of the American War, and you may know how that American War arose, and how the result, if not the object, for which men strove, was the taking away from their midst the curse of slavery, and no one who has not talked to people who have witnessed the horrors of slavery can believe that, within the memory of living men, there were found high-bred, well educated, intelligent, well nurtured people, speaking our language, and descended from the same forefathers as we, who yet could be guilty of the atrocities towards their fellow men, of which undoubtedly they themselves were guilty. But if we find that in the great contest that is being waged no one is now found to defend these cruelties which were practised even within living memory towards human beings, is it anything to make us despair because we do not find the same feeling so lively and so vigorous amongst us with regard to the duties which we owe to the dumb animals? I do not understand—there may be a difference of degree, but for myself I do not understand—any difference in kind between the duties which we owe, so far as cruelty is concerned, towards dumb animals, and the duties which we owe to our fellow men. (Cheers.) Cruelty is cruelty in whatever form it is produced, and—you may believe it or not—but I am convinced that we are only part of that great army of humanity which is advancing and advancing, I do not say day by day, but at any rate year by year, and certainly generation by generation, and I trust, nay more, I expect, to witness the same revulsion of feeling with regard to the treatment of dumb animals which we have witnessed with regard to the treatment of our fellow men. (Cheers.) Ladies and gentlemen, think what we owe to animals. Think for a moment what the world would be without them. Think of the world without any horses or dogs, or cats, or butterflies, or bees, or cattle, or sheep, or fish, or birds. Think what the world would be without the living animal world around us. We think ourselves so mighty superior to the dumb creation; why, they are like us in very many things; they have love, they have affection, they have their likes and dislikes, they have fidelity, they have anger, they have passions, they have generosity, they have fear, they have courage, they have desire of pleasing, they have love of display, they have strength of will, they have pride in conquest, they have jealousy, they have self-sacrifice, they have gratitude. (Cheers.) Who can deny that, in some measure, some animals share all those weaknesses and all those merits with ourselves. They are like us sometimes in being selfish and in being cruel, but where they are not like us in being selfish and in being cruel is in this; they are never false to their own nature. (Cheers.) Ladies and gentlemen, when we are selfish and when we are cruel, have we the same excuse that the animals have? If we are so superior as we boast ourselves to be, are we not false to the nature with which we are endowed? Therefore, while we share many things with the animals, it may be that the animals, dumb though they be, and inferior though they be, may have some salutary lessons to teach even us. (Cheers.) Now, gentlemen, enough for these what I may call large reflections. If I have interested you or enlisted your sympathy on behalf of these animals, then let me put this question to you. What are our duties towards them—are they measured by any bounds? Gentlemen, I think I shall have your assent when I say this, that while their lives are at our disposal, in taking those lives we are bound to exercise the utmost mercy that our science will permit of. Of course it is easy to prove—the argument is overwhelming—that if we did not have the power to kill, the dumb creation would absorb that portion of creation which man is entitled to fill. Are we entitled to do anything more, are we entitled to use them regardless of their feelings, are we entitled to use them for our vanity, for our comfort, or for our curiosity. This society says no. (Cheers.) If we may take some comfort in regarding the parallel which I have described to you between the feeling of old and the feeling now in these matters towards our own selves, I may venture to prophesy

that in future, and in the near future, the feeling of this society will be the feeling of civilized man. (Cheers.) Now, gentlemen, how are we to fight the battle we are engaged upon? May I utter a warning voice. May I urge that we ought to regard ourselves in the light that others regard us, and may I ask that we shall not waste our sympathy upon things that are not really cruelties in the same light as the cruelties of vivisection. I know it may be unpalatable to many earnest good people round me, but I confess that when I see people in equal anxiety about muzzling dogs as about vivisection, it seems to me that they lay themselves open an easy prey to the arguments that are addressed to us by those who do not sympathize with us at all. If I were a dog I would sooner be muzzled than handed over to be made artificially mad at a Pasteur institute. (Cheers.) And if it be a fact, as to which I would not venture an opinion, if it be a fact that rabies can be stamped out by muzzling dogs, then I would venture to say that if the dogs only had language they would be the first to insist, as many of us in vaccination matters insist, upon their neighbours having been properly and adequately muzzled. Ladies and gentlemen, there is another thing that I think we might do. Never give a penny, not a farthing, to any hospital—(cheers)—wait a moment—which has a vivisection upon its staff. (Loud cheers.) Our excellent secretary, Mr. Bryan, will present any person here with a list of those hospitals which are free from this curse, and a list of those hospitals which have vivisection upon their staff, and you may depend upon it that if hospitals found it did not pay to have vivisection upon their staff you would do more than any argument that I can impress upon you to prevent this growing up in our midst. (Cheers.) Ladies and gentlemen, into the larger questions of science I do not propose to enter, for there are other ladies and gentlemen here who are fully qualified to deal with this matter, but I do ask you if you have any desire to further the interests of this Society, amid argument, amid abuse, amid ridicule, keep your mind pure and sound and upright upon the matter of cruelty towards animals, and then the animals, if they could speak, would be grateful to you, and you may depend upon it that your work will some day be adequately blessed. (Loud cheers.)

Mrs. FENWICK MILLER moved: "That this meeting congratulate the Victoria Street and International Society on the good work done in educating public opinion during the twenty years since its foundation, and trusts it will continue its endeavours on behalf of the suffering animals subjected to experimentation." Mrs. Fenwick Miller said that congratulations might be offered to the founders and managers of this Society, the leading spirit amongst whom was that noble woman, Frances Power Cobbe (cheers), not so much because it had attained its majority—for they would all be thankful if its painless extinction had been brought about by the success of its efforts years ago—but because in the teeth of much discouragement and difficulty there had abided continuously and unflinchingly a determination in sufficient hearts and minds to stand firm against the atrocities which had aroused their humane indignation, to enable the Society to carry on its endeavours, and to enable it to look forward with security to carrying them on for as long in the future as might be necessary to produce the result that they all desired. In his "Democracy and Liberty," Mr. Lecky asserted that "Nothing has done so much to convince calm observers that women are not fit for the suffrage, as the passion with which they have taken up the anti-vivisection cause. . . . They would sacrifice, if they had political power, all the great interests of party and national welfare for this one cause alone." This eminent historian had overlooked the retort that women could make upon this, namely, that the men who would go out of office because they would uphold vivisection, regardless of all the great party and national interests that they thus sacrificed, must be quite as fanatical in favour of vivisection as the women, who would put them out because of their opinions, were against vivisection. (Cheers.) Moreover, it was a mistake to suppose that this movement was supported in an immense majority by women. There had been a very large number of illustrious men supporting the movement—men against whom no pretence of sentimentality or charge of being willing to sacrifice large affairs to small ones, because of their inability to judge justly

the proportion of things, could possibly be brought. The late Lord Chief Justice Coleridge, and the present Mr. Justice Hawkins, might be mentioned in the legal world, and in the medical world, although, alas, there was so strong a feeling of Trades Unionism that comparatively few medical men would judge for themselves upon this question, yet there was, not a residuum but a leading force—men who towered above the rest of their profession—opposed to vivisection. Of the ultimate success of this movement she was not at all afraid. There was, after all, some power that makes for righteousness somehow and somewhere. There was progress, slow and difficult it might be, but certain. Let them take the side that they knew the angels and all good forces would gladly be upon, and let them be quite sure that, difficult and slow though the process might be, theirs must be the winning side. It was extremely difficult to get the general public to believe that the medical profession would support vivisection as a whole if it had not produced some positive benefit to medicine. It was absolutely untrue. There was no benefit which could be shown to have resulted to medical or surgical science by the practice of vivisection. As soon as the public came to appreciate the hollowness of the pretences by which vivisection was sought to be justified, the success of the Society's efforts would be assured; for there was such a thing as justice, as compassion, as mercy, as love of right, as willingness even to suffer one's self rather than to inflict incalculable wrong upon others, and when these feelings were appealed to, if wisdom and tact were exercised, the end must certainly be success. (Cheers.)

Bishop BARRY—My Lord, Ladies and Gentlemen: It gives me very great pleasure to be allowed to support this resolution—although on a somewhat different ground from that which has been put before you by the mover—because it appears to me that it represents the one thing beyond all others, at which our Society and kindred Societies have to aim—the education in this matter of public opinion.

I am far, of course, from thinking that it is the only way in which we are to fight against the evil. I am quite of opinion that it is our duty to see that the law as it stands shall be thoroughly carried out and shall be properly enforced. It is quite within our province to point out, as other Societies not distinctly connected with our cause are ready to point out, that the inspection which is provided under that law is exceptionally weak and exceptionally unsatisfactory. (Cheers.) All these things, I think, we have a perfect right to do, and we shall do wisely to attempt them. I am glad to know that one effect of our agitation is, that we do not hear now, as we did in time past, from the advocates of Vivisection that they are desirous to get rid of the constraint, the beneficent constraint, which our law imposes, and to have that liberty—that unchartered license—for the practice of vivisection which obtains in other countries.

Nor, again, do I forget that our Society is intended to do what it can in the way of amendment and extension of that law. We are not satisfied with it as it stands; we believe that it is very far from fulfilling the ideas of that Royal Commission, in partial accordance with whose report it was passed. When it became law, some twenty-five years ago, I do not think any one had the slightest idea of the development of vivisection, without even the pretence of anæsthetics, which has taken place under it. I myself—although I believe many friends of the cause will entirely disagree with me—would be very glad indeed if it should please the wisdom of our Legislature, after the expiration of a quarter of a century, to have another thorough and dispassionate inquiry into this great subject. (Cheers.) We want the facts of the case. We want to be able to know on which side the truth lies in regard to the diametrically opposite statements that are put forward by authority. We want to know how far the statements are true that are made by prominent vivisectionists, that the amount of pain inflicted, at any rate in England, is at this moment insignificant—in the face of evidence collected by our Society, which leads us to a diametrically opposite conclusion. All these things, ladies and gentlemen, I think we may do. I am no idolater of law, but there is no greater fallacy than to suppose that because law cannot do everything therefore it can do nothing.

But before you can do this, and of more importance even

than the doing this, is that education of public opinion. We have an uphill battle to fight. Our course is, no doubt, beset with great difficulty. Mrs. Fenwick Miller has said, and said with perfect truth, that our cause, as far as the so-called organs of public opinion are concerned, is an unpopular cause. But, if this is the case, we simply share the experience of all the great humanitarian movements which have marked these later centuries. I, for one, am not prepared to lay a primary stress upon the inquiry into the utility of the results of vivisection. The ground which this Society takes, the ground which I have always taken, is not the ground of utility but the ground of morality; whether we have a right to do what we hold to be evil in order that a supposed good, however great, may come. (Applause.) And I think that it is very important—taking as I shall always do this moral ground principally, and refusing to do battle mainly upon the scientific ground, which I regard as secondary—that you should remember what the Chairman has put before you to-night that our work is only a part of a great humanitarian movement.

The principle which we call humanity is the principle of self-sacrifice of the strong for the weak. It is that of which there are, as Professor Henry Drummond appears to me to have conclusively shown, most interesting rudimentary indications in the lower animals; but it is a thing which belongs emphatically to our human nature, and it is the victorious force against that selfish struggle for existence, in which the strong sacrifice the weak, which science points out to us so largely in the great animal creation. It has been shown again in a remarkable and interesting book, I mean Mr. Kidd's "Social Evolution," that this principle of humanity,—this self-sacrifice, I repeat, of the strong for the weak—has been continually extending its operations in history. Your chairman has reminded you that there was a time when the weaker subject races of humanity were calmly held in the bondage of slavery, by men of high civilization, and, I am sorry to say, men also of Christian belief. The Anti-Slavery cause in days gone by was regarded as the merest fanaticism, the most contemptible pious imagination. It was met in this country by ridicule and obloquy; it was met on the other side of the Atlantic by violence and by murder; and yet gradually it went on, and it prevailed. It appealed, observe, not to any sense of expediency, but to the conscience of the people; that horrible evil of slavery has been swept away in all civilized communities, and we regard it as a great privilege and a glory to be allowed to strive against it at this moment in the dark Continent of Africa. Then, again, there was a time when, perhaps more plausibly, the criminal members of our human society were supposed to have forfeited all the right of humanity, and society revenged itself upon them by the most atrocious torture, or perhaps actually sought to wring by torture a confession of guilt from their unwilling lips. Now, we all understand that the criminal is not to be regarded as an enemy; but as having still a part in the brotherhood of humanity. While we sternly repress crime, we do this as far as we possibly can with merciful consideration to the criminal; we hold that he is not removed from the sympathy of our humanity. And now this last movement extends that principle of humanity to the lower orders of creation around us; and if ever there was a time when modern science has brought out the strong affinities that exist between the higher orders of the animal creation and human nature, it is certainly the time in which we are now living. We are at least beginning, therefore, to see that they have rights towards us, or if you please, that we have duties towards them, imposed upon us by the lordship of creation which commits them to our charge. I am glad myself to see that there are many Societies that take up the cause of the animal creation, even though we greatly regret they will not join with us in our particular crusade; and I believe, confidently, that the more the whole subject is studied, the more it will be felt that these animals are committed to our charge, not to do with them as we will, but to do with them as we ought. But the more that is the case, the more our cause will be eventually helped, and the more the particular evil, against which we are striving, will be scouted and will be abolished. (Cheers.) Whatever ridicule is poured upon us, may we not say that we are to a certain extent in the van of this great battle of humanity? Our cause, like other causes, passes

through certain stages. There is an early stage in which it is treated with contempt and ridicule. There is a second stage in which it is thought worthy of virulent antagonism and denunciation; at this stage, ladies and gentlemen, we have most certainly arrived. (Laughter.) There is a third stage, in which it begins to appeal to the thoughtful consideration of society and to stir the conscience of the people; I believe that we may see some indications already that we are passing through the second into the third stage, which I take to be the omen and the presage of some future victory. This, then, is our true position. Do not let us simply concentrate all our attention upon the one particular evil with which we are concerned; but let us consider how it bears upon the general advancement of the principles of humanity, and let us welcome as fellow workers all who go with us in this great cause, although perhaps on this particular path they may leave us to advance alone. What, after all, is our great point? It has been laid down, by our Society, from the beginning, that we are to take upon this matter the question of what is right in the sight of God, and what is right at the bar of human conscience. Do not let us for one moment be tempted off the strong ground. You have been already reminded, that upon this matter, if we did rely simply on authority, we have at our back an immense authority of men who are privileged to pronounce upon moral questions. This is not a matter on which we are to bow to scientific authority, however great it may be. That authority is great on its own ground; but this ground is not the ground on which we stand, and if you look at those who have been Vice-Presidents and supporters of the Society, I think you will find that we have among us those who are of the very highest authority in religion, in philosophy, in morality: that we have those who, like the illustrious judges to whom allusion has been made, are used to deal with human nature, and to understand what is its strength and its weakness. We had, I remember, two great English historians who have just passed away, antagonistic in everything else, but yet brothers in the cause in which we are engaged. (Cheers.) We have had the two great poets of whom this generation has been so justly proud, differing again in many other characteristics, but united upon this. And I am one who believe that the poet, rather than the scientific man, has insight into the deeper realities of the human conscience, and the truer appreciation of the deeper interests of humanity. (Cheers.) Scientific authority, let us bow to it on its own ground, but let us refuse to put our consciences into its charge.

We are banded together against what we believe from our hearts to be in essence cruelty. We refuse to use—at least I for one have always refused to use—any condemnation to individuals. To their own Master they stand or fall. But we are combined together to resist one great form of what we believe to be cruelty; and by cruelty I mean the infliction of excessive pain upon the helpless, either for our own interests, or even for the interests of human society. I know there are very many degrees of cruelty. There is the cruelty of thoughtlessness and ignorance, and a very large amount, I think, of those cases which the Royal Society for the Prevention of Cruelty to Animals has to take up, are really instances of the cruelty of culpable ignorance. There is the cruelty that comes from tyranny, and from violence of temper. There is also the cruelty that comes from the belief that we have a right to inflict any amount of pain, and to use the animals as we will in what we conceive to be a great cause. The Holy Inquisition of days gone by has passed into a proverb for cruelty; yet remember it was not the cruelty of men who inflicted pain wantonly, but of those who, however monstrously they were mistaken, believed that in that they were serving human society, and even serving the glory of God. Yet history has condemned their cruelty, and I believe that history in the hereafter will condemn the cruelty of modern times, even though it be performed in the cause of science, even with a hope of doing some benefit to humanity. Benefit to humanity—I would ask to what humanity is it a benefit? Is it a benefit to the higher humanity of the spirit, or is it a benefit simply to the lower humanity of the body? I assert unhesitatingly that any amount of benefit, if it could be gained for the lower humanity of our bodily nature, would be dearly bought indeed, at the price of infringing, even in the slightest degree, that sensitiveness to moral truth and moral

righteousness which is the true essence of humanity. (Cheers.) Of course, there is a wanton cruelty, a cruelty of the infliction of pain merely for the pleasure of its infliction. Of that I for one do not accuse those who support this cause which I so strenuously oppose, although I cannot but see that the infliction of this cruelty, supposed to be in some great cause, may tend so far to harden some hearts, that at the end they are guilty of cruelties that seem to be useless, merely to gratify a quasi-scientific curiosity.

Well, ladies and gentlemen, this is the work we have in hand, to educate public opinion upon this great matter. We have passed, as I have said, from the stage of neglect, we are passing now through the stage of antagonism; but I believe that we are beginning to awaken the conscience of the people, especially the conscience of the great simple mass of the people. If we can only do this, our victory is at hand. I see this in the very tone which is taken upon this subject. It is already thought that it is a subject which is worthy of careful and of serious argument. The vulgar abuse—for there has been some on both sides in this controversy—is now, I am thankful to say, entirely discredited. As I have said, we hear nothing now of protest against the law as it stands. We have the strongest support in our desire to see it enforced and improved. Men are even beginning to understand that we are not in any sense those who rely simply upon sentiment, although sentiment is and ought to be one of the great powers that move the world. (Cheers.) We think that we can call to our assistance the arguments of the most solid reasoning, and—what is of infinitely more importance—the arguments of the highest moral sense.

All we have to do is to go steadily on. Let us fight bravely, and have the courage of our opinions. Let us fight truthfully, being careful never to use any argument which we have not tested; never to make any statement which is loose and inaccurate, and not based upon evidence. Let us fight, I add, in the spirit of true charity rather than of denunciation. There is a Society connected with this great cause which is a society for united prayer; and that prayer is uttered, not merely for ourselves in the great cause, not merely for the information of the great mass of society, but also for those who are our opponents in this matter, in the trust that God will grant to them to see what we believe to be the error of their way, and to bring them back to the truer and the more righteous side. Let us do all this, and, above all, remember that, as Mr. Kidd shows in that *Social Evolution* of his, the great moving instrument for the inculcation of this humanity has always been the religious principle—the belief that the animals, like ourselves, are creatures of the one God, and that, if sovereignty is delegated to us in measure from Him, it must be exercised in the spirit in which the Divine Government rules, and that spirit is the spirit of righteousness and the spirit of mercy. Bravely, truthfully, charitably, and in the Christian faith, let us go on in this cause; and then, whether we may live to see it or not—whether the battle may be difficult or easy, whether the struggle may be short or long—in the end, we shall conquer in those principles, for they are the principles which under the sign of the cross have conquered the world. (Loud cheers.)

MR. SWIFT MACNEILL, M.P.: I attended this meeting simply in the capacity of a listener, but I could not refuse a call to speak when it was made by the Chairman, because for twenty-five years the Chairman has preached a sermon so far as artificiality is concerned; he preached it at Oxford when I was there with him; he preached it at the House of Commons when I stood at his side, and he is now on this platform preaching it too. I cannot address you with the fulness of knowledge that many of you possess, but after all this is a matter not so much of the head as of the heart. (Cheers.) It appeals to all the higher principles of our nature. Pleased and rejoiced I am, looking round at this audience, to see how many ladies—or let me call them by a nobler name—how many women are present; for kindness is the glory of the female sex, and this is a matter of kindness, of good feeling, of human sympathy, of tenderness of heart. (Cheers.) I heard from Mrs. Fenwick Miller, for the first time, that the founder of this society was Miss Frances Power Cobbe, and that alone gives me, as an Irishman, a place upon this platform, for she came from the same country, and was born in the same town as

myself. (Cheers.) Under the correction of my Lord Bishop and Prelate of the Church to which I have the great happiness to belong, I say that this movement against vivisection is only an enlargement of the high and holy precepts of the Sermon on the Mount. Never shall I forget, some two or three months ago, when I was in Westminster Abbey, and when I heard that gentleman who fills that Abbey, and who is the Chaplain to the House of Commons, say casually in his sermon "Animals have divine rights," how my heart bounded with enthusiasm at that sentence. (Cheers.) My Lord Bishop has referred to the various stages in which every early movement is invested; first ridicule, then the second stage of slander and falsehood and misrepresentation, and then the third stage of argument; and he illustrated that by the agitation in favour of the abolition of slavery. When in 1783 William Wilberforce stood up in the House of Commons to move for the first time a resolution in favour of the abolition of slavery, he had not a single gentleman among the 558 members (as they then were), to second that motion. Still, he lived to see its accomplishment and lived to see it for many years after. (Cheers.) It is delightful to think—and it is a happy omen for the cause too—that the grandson of Mr. Wilberforce, to whom I have just referred, is one of our most enthusiastic and strongest supporters. Perhaps I may mention one claim that I have to be heard to-night. A lady is here with whom I have the great pleasure and privilege to be of kin, and who has devoted a very ample fortune in Dublin to the protection of cats and dogs and the preservation of their rights. (Cheers.) People hardly realize what vivisection is. If everything that surgical opinion has said was right, if it had procured incalculable benefits to the relief of our sufferings, I still say boldly that, wrong-headed and misdirected, I would protest against it. The life is not worth living that we live simply for our own selfish interests, shutting out all ideas of sympathy for those who are around us. Everyone of us who is worth having or worth knowing has had a most tender affection at some time in his life for members of the animal creation. They have been our friends; they have been our sympathisers, they have occupied a large share of our attention during the day; their mute appeal to us almost warms our hearts; they are our friends. Let us think of any favourite dog or any cat; and would we not, at the risk of our own lives, protect that animal from anything like cruelty. (Cheers.) What would be the benefit to us of the relief from pain, if we knew that we had sacrificed a sentient being to procure that relief for ourselves, and sacrificed a sentient being by unspeakable tortures. I am delighted to hear from my lord the suggestion that you should not subscribe to any hospital where there is a vivisectionist. I would go a step further and, although of course on this platform such a thing as boycotting should be unknown (laughter), I would ask every nice young lady in this meeting to give the cold shoulder to any man whom she thinks is a vivisectionist. (Laughter and cheers.) Ladies and gentlemen, I am afraid I am a very audacious man in attempting to address a highly informed audience on a matter in which I have only the general interest of a public man, with perhaps a small degree of a warm heart; but I can tell you that so far as my humble influence goes I will do my best, in season and out of season, to put down this atrocious wrong. (Cheers.)

The resolution was carried with acclamation.

The Rev. JOHN BAIRD moved "That the Act in force in regard to vivisection not having so far abolished the cruelty in experiments on living animals, must be condemned as a failure, and this meeting is of opinion that if the perpetration of cruelty under the guise of research is to be prevented, nothing short of a law distinctly to that effect will attain the object in view." Mr. Baird declared that, in Scotland, there was amongst medical men in many cases a secret dubiety as to the legitimacy and the fruitfulness of vivisection as a method of research, and, privately at any rate, they frankly

expressed this doubt. The general state of public opinion was by no means so pronounced against the advocates of anti-vivisection as it used to be. They were now able to obtain a hearing, and the reflective and intelligent of the community felt that there was a great deal to be said against vivisection. Therefore, while the work was arduous and difficult, yet it was bearing fruit, and gradually the community was being brought to look with a measure of approbation upon the aims of this Society. The anti-vivisection agitation did not arise out of any hostility to the medical profession; it had a humanitarian source. It sprang out of the feeling of indignation which good and virtuous and holy men and women felt at the very thought of these awful atrocities being perpetrated in our midst. Turning to the resolution he was submitting, it declared that the popular impression that cruelty was prevented by the safeguards of the Vivisection Act was utterly erroneous; that under the Act there was practised cruelty, not merely pain, but torture that in many cases rivalled the worst barbarities perpetrated on the Continent; thirdly, that cruelty under the guise of research was indefensible, and an absolute abuse of our power over the animal creation; and lastly, that the abolition of vivisection was a proper and a legitimate demand. (Cheers.) British legislation on the lines of humanity would be entirely incomplete until vivisection was rendered a penal act in our midst. (Cheers.)

Mrs. JAMES PENDER, in seconding the resolution, said she was sure the eloquent speeches to which they had listened must have gone home to the hearts of the audience, but she trusted that the impressions thus made would not be, as was frequently the case, allowed to die out. Let each person think what vivisection was, and endeavour to bring home to everybody with whom they came into contact a living picture of the atrocities against which they protested. The vivisectioners themselves did not pretend that their practices were for the actual benefit of humanity; they said they were in the interests of science. A Boston paper recently published the statement that "it is distressed to learn that there is a growing habit with young doctors, who ought to be vivisectioning or otherwise experimenting, to devote themselves to the practical work of the healing art." This was an extraordinary statement for a medical professional journal to make. If vivisection were not to bear its fruits in the healing art, it deserved the most emphatic condemnation. (Cheers.) This question required to be taken more into our private lives. We must show emphatically a hatred and detestation of vivisection and vivisectioners. The only way in which the hearts of the vivisectioners could be touched was through their interests, and once they saw that their practices were revolting to humanity—to which they really owed their existence, for without patients doctors would soon cease to exist—if they were shown emphatically that doctors who practised vivisection would, for that very reason, lose their practice, that would be better even than a prohibitive Act of Parliament. In conclusion, Mrs. Pender appealed to the sympathy and kindness of the audience, and above all to their love for the animal creation, without which there would be very few pleasures of life that would be worth having. (Cheers.)

Dr. BERDOE, in a brief speech in support of the resolution, enforced with several illustrations the fact that experiments in the laboratory upon dumb animals were perfectly valueless as any guide to the treatment of human beings in a state of ill-health.

The resolution was carried unanimously.

Mr. R. S. WOOD, M.A., moved a vote of thanks to the Right Hon. Lord Coleridge for presiding, and to the various speakers who had addressed the meeting.

The resolution was seconded by the Rev. THEODORE HITCHENS, and carried with acclamation.

The CHAIRMAN having briefly responded, the proceedings terminated.

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 3.]

LONDON, JULY 1, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Earl of Strafford has, at his own request, been elected a Vice-President of the Society.

IN the House of Commons, on May 20th, Mr. John Burns presented a petition from the inhabitants of Battersea, in meeting assembled at 79, Abbott Road, on the 27th April, 1896 (Mr. W. Abbott, chairman), praying for the total prohibition of vivisection.

GOOD news from Philadelphia. One hundred thousand dollars constitute the handsome legacy left by the late Mr. Edward H. Kennedy to the "Woman's Branch of the Pennsylvania Society for the Prevention of Cruelty to Animals." This Society was founded by Mrs. Caroline Earle White some years before she founded the "American Anti-Vivisection Society," (both of Philadelphia), and the two sister societies have for their joint organ the excellent *Journal of Zoophily*, edited by Mrs. White, Mrs. Lovell, and Dr. Matthew Woods.

THE International Congress for the Protection of Animals will be held at Buda-Pesth on July 18-21. Dr. Berdoo is to represent the Victoria Street Society, and also the Bristol and Irish and two foreign Societies. America will be represented by Mr. Peabody, of the New England Society. All friends of the cause are, we understand, invited to attend.

The *Anwalt der Thiere* publishes the following list of subjects to be discussed at the International Congress at Pesth, on the 18th, 19th, 20th and 21st of July:—

- (1) How is the question of vivisection to be decided, viewed from the standpoint of natural and medical science, and from that of humanity and animal protection? By Professor Dr. Paul Förster, Berlin.
- (2) International regulation of the transport of animals on railways. By Keller-Jäggi, Aarau.
- (3) The transport of birds in international trade. By Registrar Kaeflein, Karlsruhe.
- (4) The press and animal protection. By A. von Werther, Pesth.
- (5) Migratory birds. By Dr. Ohlfen, Rome.
- (6) Animals in captivity. By Frau Dr. Josefine Szechy, Klausenburg.
- (7) a. The wholesale slaughter of birds.
b. The juvenile societies for the protection of animals, by R. Engel, Wiesbaden.
- (8) The life of the hedgehog, and its use in agriculture, and for man's welfare. By Pastor Kapff, Stuttgart.
- (9) The progress of animal protection in Dalmatia. By the S.P.C.A., Zara.

It is further announced that a special programme will be issued giving the order of each day and information as to hotel life and accommodation, excursions, entertainments, etc., etc.

IT was a surprising thing that Mr. Horsley should be competent to become a delegate to a Women's Liberal Federation last month, and to appear as a speaker in favour of vivisection. It seems to have happened that he was challenged as to whether he did not belong to the opposite political party, but according to the *Daily News*, even if that were the case he could not have been excluded on the rules of the Federation as they stand. We are privately informed that Mr. Horsley was there through the influence of a female relative of Sir Walter Foster. If that were the case we cannot compliment the lady who selected him on either her taste or discretion, because we should take it for granted that nobody with taste or refinement would select such a man for a champion. As to discretion in the choice, there could not have been a greater lack of it, because it was as indiscreet a selection as could have been made, seeing in what outrageous terms Mr. Horsley had abused a woman like Miss Cobbe. But the women of the Federa-

tion, whose hearts are in the right place in regard to the vivisection question, proved to be in the ascendant, and they had the satisfaction of seeing Mr. Horsley placed in a very small minority.

THE Hon. Sec. of the Church Anti-vivisection League has succeeded in "drawing" the *Lancet*, the conductors of which are not quite so bigoted, perhaps, against the admission of new light as those of the competing *Medical Journal*. Miss Woodward had issued a letter to clergymen inviting them to use their influence in regard to the approaching Hospital Sunday in favour of the prevention of vivisection by stipulating to the Mansion House Committee that their offertories should only be given to those hospitals which had no vivisectional laboratories attached to them. The letter alleged also that by sending their offertories to be used indiscriminately for the benefit of all hospitals the clergy were "directly supporting and subsidising vivisection, and alienating from the Church an increasing number of people." The *Lancet* inserted the letter in full in its issue for May 30th, and added some other weak comments, to which Miss Woodward, the following week, effectively replied. Of course the *Lancet* did not accept that reply as conclusive, but less partial judges might form a different opinion.

THE *Lancet* appears to keep a tame theologian in the office, or possibly the office-boy reads the *Catholic Times*. In its leaderette on the Church Anti-Vivisection League in the issue of May 30th, it propounded the discovery that St. Thomas Aquinas ("Q. lxvi.," whatever that reference may mean) says that "man has dominion over the lower animals," [who denies it?] and advises those who desire to read up the theology of the question to study "an admirable paper" by Father J. S. Vaughan. Fancy commending the theological lucubrations of this gentleman to a Society of Anglican clerics and laymen! It *must* have been the office-boy.

It is not often that we find much with which we agree in the utterances of professors of physiology on the animals' question. Our surprise and gratification were excited, however, by the following caustic remarks from the pen of Dr. Campbell Black, Professor of Physiology at Anderson's College, Glasgow, in the *Scalpel* for May. Referring to the objection to self-advertisement in the medical profession, Dr. Black says:—

"You may invent a 'toxine' from some animal abomination, and get it boomed as a cure for some common and grievous malady. The chances are ninety-nine to one that the remedy is a bare-faced fraud; but if it will only catch on it will spread like cholera, and, though it should last but from six weeks to six months, your fortune is made—fools are so numerous—and you can retire to a country seat and meditate on the pregnant text, '*Populus vult decipi et decipiat est.*'"

DR. C. W. INGRAHAM has severely criticised the guinea-pig test for tuberculosis in the *Medical Record* of May 23rd. It will be remembered that Professor Koch founded his theory of a cure for tuberculosis on certain experiments on guinea-pigs, but he soon learned to his cost, and his unhappy patients to theirs, that his new remedy did not behave on the human subject in quite the same manner in which it acted upon the guinea-pig. Yet experiments are still going on upon these animals upon much the same lines. The guinea-pig is said to be highly susceptible to tuberculosis, and Dr. Ingraham for

this very reason thinks the experiments unreliable. The unhealthy conditions in which the animals are kept in the laboratories, their food, environment, heredity, danger of the breeders or experimenters infecting them, all tend to vitiate the experiments. It is very remarkable how all these old contentions of our own are finding support in the highest scientific quarters.

THE *Veterinary Journal* for June opens with an article by M. Nocard, of the Alfort Veterinary College, on the contagion of glanders through the digestive organs. The experimenter has been engaged in a series of researches with a view to discover the possibility of causing an attack of glanders in various animals by mixing the virus with their food. He succeeded, and says "the unexpected result gave me immense satisfaction." So easily is a vivisector pleased. He repeated his experiments on eighteen horses, one ass, and a mule. He spread the glanders culture between the slices of carrot or bread like a sandwich, or diluted it in half a bucket of water. All the victims became glanderous.

In the *Journal of Physiology* (1894) Dr. Vaughan Harley recorded the results of a series of experiments tending to prove that sugar has an almost specific value as a food for the muscles. Physiologists, he said, have *proved* that sugar is the principal, if not the only source of muscular activity. But another set of physiologists totally deny this. The *Medical Record* of May 23rd, 1896, gives an entirely opposite view by Dr. D. T. Stokvis, of Amsterdam, who has *proved*, by a long series of experiments, that sugar has no influence whatever on muscular power, and that those researchers who say it has are merely influenced by their own personal equation—a nice, polite way of contradicting a brother researcher.

THE *British Medical Journal* of April 6th, 1895, contains an account of some very cruel experiments which lack of space has prevented our noticing before. They consisted in starving dogs in order to test the actions of drugs upon them in that condition. Th. Jordan was the author of them, and the account is taken from the *Gen. p. d. Med. Wiss.*, of March 2nd, 1895. He sums up the work of previous experimenters as follows:—

"Delafoy found that starvation increased the action of strychnine in frogs. Lewin, from experiments on animals, considered that hunger caused the effect of intravenous injection of quinine, atropine, and nicotine to be diminished. This result in the case of atropine was confirmed by Roger."

HERE is the account of what Jordan himself did, and it will be seen that before subjecting his victims to poison this ardent researcher kept the unfortunate animals, to the number of fifty, entirely without food from periods of three to twelve days:—

"Jordan himself has made fifty experiments to ascertain what effect starvation has in modifying the action of digitalin. He took dogs for his experiments, and in each case injected the digitalin in the form of a watery solution (3 per mille) into the left vena cruralis. The dogs experimented on were allowed to drink water, but *had no food*, and the experiments were made on the *third to the twelfth day of fasting*. Control experiments were made on dogs chosen on account of their similarity for experimental purposes to the dogs used. He found that the minimal dose which appeared to have any effect was less in the starving dogs than in the others; that the minimum fatal dose is likewise less; and that by the same dose starving dogs are killed more rapidly than the control dogs."

It is not very surprising to the non-scientific mind that

animals brought to death's door by starvation should die sooner than well fed animals of the same dose of poison.

No experiments in pharmacology are complete that do not involve the exposure, section, and stimulation of the vagus nerves, and therefore Jordan must needs add this item of torture to the horrors of poison and starvation :—

"In fasting dogs the vagus nerve is less easily stimulated; this phenomenon becomes more distinct the longer food is withheld, and, Jordan thinks, may account for the diminution in pulse frequency being so little marked during the first period of the action of digitalin in fasting dogs."

The organ of the British Medical Trades Unionism has no word of condemnation for these ghastly atrocities, for are they not perpetrated in the sacred name of "Science?"

AND this is the kind of thing which is palmed off on the uninitiated British public as the beginning and end of scientific healing. That the fraud does not impose on the Faculty is plain enough from the dismissal of pharmacology from the list of subjects of examination for the Royal College of Physicians' diploma; and every day we have evidence accumulating of the uselessness of such teaching. Writing in the *British Medical Journal* of May 30th, 1876, Dr. Saundby condemns Pharmacology as a subject of study and examination for students of medicine; and he adds :—

"In fact, I have very reluctantly formed the opinion that a large number of students are totally incapable of deriving any intellectual advantage from a large part of our present medical education, and that scientific principles are mere dust and ashes in their mouths. Yet I as firmly believe that most of these men have in them the making of good medical practitioners, and as after all this is the object of medical education, our present system cannot be right."

OUR readers will not have forgotten the memorable words of Dr. Samuel Wilks, now President of the Royal College of Physicians. "What I do object to," he said, "is treating diseases on principle when we possess no principles." And now we have Dr. Samuel West, Assistant Physician and Demonstrator of Practical Medicine at St. Bartholomew's Hospital, drawing a sharp line of contrast between Pharmacology and Therapeutics, and showing that the former has nothing to do with the latter. In an address on "Rational Therapeutics and the Use of Common Drugs," published in the *Lancet* of May 30th, Dr. West maintains that Pharmacology in the restricted sense is merely a kind of applied physiology, and in the looser sense it is only another term for *materia medica* and therapeutics as formerly understood.

Two quotations from Dr. West's address will be useful. We have italicized some portions of these :—

"Therapeutics has not yet passed out of the empirical stage, and from whatever source the suggested remedy comes its value has to be tested and proved at the bedside. It is to empiricism tested by bedside observation that medicine owes most of the remedies it finds of use. Yet we often hear this empirical bedside study of the action of remedies spoken of with disparagement, as if it were the opposite of rational." "We should all agree that we ought to send our students out into practice as highly equipped as possible with therapeutic knowledge and to train them so that they should be able, not only to practice therapeutics, but to think and reason about the ways in which their remedies act, and this knowledge must be tested by examination; *but it does not follow*

that an examination in a special department of applied physiology is also necessary for the purpose. Indeed, the requiring of such examination seems to rest upon the assumption that *therapeutics is an art based upon a science of pharmacology*—in other words, that therapeutics is applied pharmacology. Put in this form the fallacy is obvious. It is an absolute reversal of the real relation between the two subjects at the present time, for *even the most recent works on pharmacology contain, as stated, comparatively little beyond that which has been derived from empirical therapeutics.* We trust this will not always be so, but it cannot be denied that this is the case at the present time."

Surely, after this, on bare utilitarian grounds, the starving and torturing of animals in this line of research should be put a stop to.

THE *Lancet* of May 16th records, in a report of the Royal Medical and Chirurgical Society, a list of experiments on the intestines of dogs which must have involved excessive pain in numbers of cases. Mr. Walter Edmunds and Mr. C. A. Ballance communicated a paper entitled "Observations and Experiments on Intestinal and Gastro-Intestinal Anastomosis." The object of the experiments was to determine the best method of uniting either bowel to bowel or bowel to stomach. The experiments were made on dogs. The following extract will give an idea of the value of the operations. In the "successful" cases the animals must have suffered much after the initial operations. In the "unfinished" ones, and in the cases in which the animal died, the suffering must have been extreme :—

"Various methods were tried—namely, Senn's plates, Davis's plates, Littlewood's plates, Mayo Robson's bobbin, Murphy's button, and Halsted's method of suturing. In the case of Senn's plates, Mayo Robson's bobbin, and Halsted's operations the animals did well; with Davis's plates and Littlewood's plates the experiments were not carried to completion. With Murphy's button the dog died from leakage *because the button, which had been specially made for use in dogs from actual measurement, was very slightly too large for the dog in question*; this, therefore, did not tell much against the button, but it indicated a difficulty that might arise in operations on man."

It appears, after all, that it was the experience in surgery and not experiment on healthy animals on which real reliance was placed by the speakers, and Mr. Bryant spoke a much-needed word of warning *adpropos* of the *argumentum ab animale* :—

"Mr. Bryant remarked on the much greater thickness of the walls of the intestines in dogs; and a great deal of the ridge or diaphragm which was found after the Lembert suture was, he thought, due to this; one should be, therefore, *very careful in applying these results to the human being.*

It is constantly affirmed that no cruelty to the horses is involved in the preparation of diphtheria anti-toxin. We gather, however, from a paper recently published in the *Journal of Pathology and Bacteriology* by Dr. Louis Cobbett, of the Cambridge Pathological Laboratory, that the injections cause "considerable constitutional disturbance, very rapid breathing, shivering, followed by profuse sweating and diarrhoea, fever, swellings at the seat of injections, and abscesses."

New light is thrown in Dr. Cobbett's article on "The Cause of the Diminution of the Anti-toxic Power of the Serum of Immunized Animals." The writer says: "Dr. Armand Ruffer has informed me that the first three horses which he inoculated lost two-thirds of their anti-toxic properties after some time, in spite of repeated injections of filtered toxin." This reveals something of

the danger of injecting into the human body an animal disease-product, the constitution of which must always be of perilously uncertain strength.

MR. WALTER EDMUNDS, F.R.C.S., records a number of experiments on animals with cocaine in the *Journal of Pathology and Bacteriology* for January last. He injected cocaine into a monkey, after cutting and stimulating the cervical sympathetic nerve :—

"Immediately after the injection he jumped about in an excited manner; then his movements became less precise, and soon he had to hold on to the side of his cage to retain the erect attitude; then his hold relaxed, and he collapsed on the floor of the cage, and had a succession of attacks of clonic spasms, during which the arms were extended and the hands clenched, the head partly thrown back, and the upper eyelids retracted."

The animal died in half an hour. Five monkeys died from the effects of the injections.

In seven monkeys, a few days before commencing the cocaine injections, a long piece of the sympathetic nerve in the neck was cut out. The experimenter says :—

"The experiments related above were made at the Brown Institution, and the writer has much pleasure in expressing his thanks for the opportunities afforded him."

Of course chloroform and ether were out of the question in a research of this kind.

HARVEY insisted on the value of physiological truths for their own sake, independent of their immediate utility. The practical benefits arising from his discovery of the circulation of the blood were certainly not manifest in his own practice. Aubrey tells us that "though all of his profession would allow him to be an excellent anatomist, I never heard any that admired his therapeutic way. I know several practitioners that would not have given threepence for one of his bills [prescriptions], and that a man could hardly tell by his bill [prescription] what he did aim at."

"Four kittens of a brood, born in the laboratory." Such is the commencement of "Experiment 75," recorded by Dr. D. Noël Paton, Superintendent of the Research Laboratory of the Royal College of Physicians of Edinburgh, in the *Journal of Physiology*, vol. xix., 1896. The paper records the effects of starvation on the fat in the body. Kittens were kept without food for periods varying from 16 to 72 hours, when they were killed and examined. Some pigeons were kept without food for "about 96 hours." We do not envy Mr. Noël Paton the possession of any knowledge he may have gained from the lingering agonies of his poor little victims.

THE *Veterinary Journal* for June has an interesting article on "The Cause of the Tsetse Fly Plague." It is well known that domestic animals entering the fly districts are seized, in the course of a few days after exposure to the attacks of the poisonous insects, with fever and wasting, and almost invariably die. Horses, oxen, and herds of native cattle, entering the fly districts, are speedily destroyed, yet on man no effect is produced by the attacks of the insects beyond temporary irritation. Wild animals do not suffer. Why this is so experts cannot tell us, and the laboratory people, who, of course, probe the secrets of Nature to the bottom, scorn to enlighten us.

DR. W. HUNTER, Assistant Physician to the London Fever Hospital and the West London Hospital, and Pathologist to Charing Cross Hospital, has experimented, says the *Journal of Pathology and Bacteriology*, on the action of a drug with the unpronounceable name, "Toluylenediamin." This drug has the peculiar action of causing intense jaundice in dogs; it is supposed to cause a destruction of the blood. That is the way to make a name in scientific medical circles. If the learned researcher had discovered a drug which would cure jaundice in men nothing would have been heard of him; but the jaundiced dogs may lift him into fame for a week or two.

OUR CAUSE IN THE PRESS.

"OUTSIDERS" AND VIVISECTION.

(FROM THE "SUSSEX DAILY NEWS," BRIGHTON, JUNE 1ST.)

SIR,—It seems strange that in these days of enlightenment, when cruelty in all its forms is condemned, so great a blot should be allowed to rest upon us as the practice of vivisection. I do not want to wrong the members of the medical profession, to whom in various ways we owe so much, by attributing to them motives and views which perhaps many of them do not hold, and I can understand the attitude of silence which they for the most part assume when the subject is mentioned in their presence, from a wish no doubt not to put themselves in antagonism to the practices of their more scientific brethren. But it is somewhat irritating when our medical friends screw up their lips, try to look unconscious, and virtually tell us that we outsiders know nothing about the subject, and therefore are not qualified to form an opinion upon it. I should find it hard to believe that the same horrors are perpetrated upon animals in this country as, no doubt, is the case abroad. But still I must think that there is quite enough here to call for more active interference, and to my mind one of the chief evils connected with this practice of vivisection is the secrecy with which the experiments are conducted. We want more publicity and inspectors who are not only not vivisectioners themselves, but are free from the suspicion of strong sympathy with them. I hope the subject will not be allowed to drop. It is hard to stir the minds of people to take an interest in these subjects, but when they are fairly roused they generally do not cease agitating till they get reform. I trust it may be so in this case.

Yours, etc.,

Brighton, May 29th, 1896.

J. H. A. GIBSON.

VIVISECTION DETAILS IN "THE INCUBATED GIRL."

(FROM "EASTERN MORNING NEWS," HULL, MAY 5TH.)

SIR,—In your review of my book, "The Incubated Girl," in a recent issue, you take exception to the few details of vivisection introduced on the grounds that the Vivisection Act renders such impossible. Did it do so, I should not have introduced these details; I do not speak without book. Who can tell what goes on behind the laboratory doors? The inspection, such as it is, is very slight, moreover the action of curare being, as I have described it, paralyzing to all sense of motion or sound, what proof of the torture inflicted remains? In point of fact the sense of feeling is as acute, possibly acuter, than ever, and the torment unutterably multiplied by the paralyzing effect of the drug. Dante, seeking for horrors for his "Inferno," could not imagine anything equal to an operation under curare. Far from lessening the evils of vivisection, the Act alluded to has increased them; since what was before a public performance, as it were, is now in great measure a secret thing. In my book I have but touched upon the fringe of the question, the matter of how vivisection affects the operator in his relations with his fellow-creatures, and almost the whole of the book is true; "truth is stranger than fiction" once again. There are plenty of things which imagination can never reach to, and in this work I have left my imagination out as far as possible.

Southsea.

Yours truly, etc.,

FRED T. JANE.

VIVISECTION AND CONDEMNED CRIMINALS.

(FROM "THE ECHO," LONDON, JUNE 18TH.)

SIR,—From time to time, in this country and in America, a suggestion is made that condemned criminals shall be used in place of animals for medical and surgical experiment. Your correspondent, J. A. Knights, who is apparently in earnest, thinks that "some form of vivisection is absolutely necessary if we are to understand what goes on within the human frame." Well, we have been experimenting on men and animals for two thousand years and more, and the knowledge we have gained has only served to make confusion worse confounded. I read a clever essay to-day in the library of the College of Surgeons, in which the scientific writer declares that the less a man knows of scientific medicine, the better doctor he makes, and if we may judge by the marvellous cures wrought by Father Kneip, of Bavaria, the statement does not seem very far from the truth. For all practical purposes we know quite enough of "what goes on within the human frame." How to set right what goes wrong in that said frame is the difficulty. No cutting up alive of dogs and cats, no torture of poor wretches—"right-minded criminals," your correspondent calls them (as if a criminal ever could be right-minded!)—nothing of this sort will ever advance the healing art. It is all a muddle and a jumble now, and vivisection tends to make it worse. I leave aside the moral part of the question, for sure I am our England will never permit the torture and mutilation of criminals. The question is whether we have any right to take their lives at all, much less by the hands of Professor Mangledog plus Billington.

I am, sir, yours, etc.,

EDWARD BERDOE, M.R.C.S.

June 15th.

HUMAN AND OTHER VIVISECTIONS.

(FROM THE "PALL MALL GAZETTE," JUNE 8TH.)

SIR,—The knowledge of your science writer is very imperfect when he suggests that "in a certain event" human vivisection might have to be resorted to, and it would have been well if, before seeking to instruct the public, he had sought instruction himself. The vivisection of human beings has been resorted to not only in ancient, but in recent times, and is still, if it were ever, necessary, seeing that experiments on animals cannot certainly decide by the phenomena they present what would happen in the like circumstances on mankind. But whether experiments are made on animals or men they are alike unjustifiable. A particular man has no right which he can substantiate to experiment on his own kind, any more than on animals. The golden rule, "Do as you would be done by," among Christians at any rate, forbids both kinds of experiment, and it ought to prevent it among any and every set of moralists; for if there be any morality apart from religion, it could hardly be founded otherwise than upon a recognition of each other's rights—upon justice and mercy, that is, mutually practised. Were it possible that the vivisection of men could ever be legalized it might go hard with the vivisection in the presence of a populace excited by his and his tribe's outrages upon animals.

I know it is the "scientific" idea—and perhaps also your correspondent's—that criminals only, if any human beings, should be vivisected; but I venture to maintain that even from a criminal justice can only rightly exact the penalty prescribed by the law which he has broken. We frequently see debates as to whether magistrates have done right in fining a culprit twenty shillings when a penalty of ten would have met the case; or in committing a poor hungry tramp for fourteen rather than seven days' imprisonment for stealing, say, a turnip from a field; and public feeling is a good deal stirred by appeals as to the justice or injustice of the exaction of these (comparatively) trifling penalties. It is not, therefore, very likely, so far as my judgment goes, that the authorized vivisection of human beings will ever come to pass. That the unauthorized vivisection of human beings goes on—or, I will rather say, has gone on, for more secrecy is exercised now than formerly—there is no doubt at all. That being so, the question is if the Public Prosecutor ought not to be moved to take proceedings for the infliction of grievous bodily harm, for that is what is done, and it is an offence, and a serious offence, against the law as it stands.

Your correspondent may, or may not, know much about the current phases of the vivisection question, but if he does he will be aware that the medical supporters of vivisection form a very strong phalanx, and have the sympathy—to my own deep regret—of the leaders of the political party at present in the ascendant. It is, however, remarkable that while this is the case, individuals among the professors and practisers of vivisection and other doctors, have openly confessed that the practice is of little or no utility to medicine, and that the proper study of the doctor is man—not to vivisection him, but to observe him in health and record his symptoms in disease. I trust your space will allow of your inserting two or three short extracts to illustrate this:—

"It is customary to say that medicine is 'applied physiology,' and it would be very desirable if we could honestly say that this was the case. But the stock of physiological knowledge which we are able to apply effectively in the practice of medicine is infinitesimal as compared with our ignorance both of the intimate nature of vital processes and the means of regulating or controlling them."—Prof. Ferrier, *British Medical Journal*, November 23rd, 1895, p. 1,277.

"The value of physiological knowledge to the practitioner is not so great, since so much current physiological teaching ignores human physiology in its relation to medicine, and the science is taught from the standpoint of the pure physiologist.

... The burden laid on the student of medicine is so great and increasing that it is essential that too much time should not be spent in studies taking him away from the hospital wards."—Prof. J. R. Bradford, *Times*, October 2nd, 1895.

Just one other extract, still more recent, if you please, in regard to the successful use of drugs to combat disease. The speaker had been referring to the recent substitution of the word "pharmacology" for "therapeutics," and pointing out that both meant practically the same thing, and that in books with either title the account of a drug was formed for "the greater part," notwithstanding laboratory experiments on animals, "of a statement of the effect of drugs upon man in health and in various conditions of disease. This part forms three-quarters, nine-tenths, or in some cases even more, of the whole. And how has it been obtained? By clinical observation such as you and I can make and are making every day."

—Dr. S. West, the *Lancet*, May 30th, p. 1,474.

Now, Sir, these extracts are not garbled, they are at your correspondent's service, and will probably be found by him, once again, "more than enough for nothing." The frame of mind in which he writes and has written is characteristic of the supporters of vivisection, who, utterly unable to controvert successfully the evidence which we, its opponents, can and do adduce, seek to discredit us by vituperation and the language of the men of the streets. If the pro-scientific party think this kind of thing creditable to themselves, I do not, and I do not believe the public will think so. The principles underlying the anti-vivisectionist agitation are those of justice, mercy, and most certainly truth. "To err is human." A slip may have been made in times past, but it was amply explained, and there have been no "discreditable tactics." Everybody connected with this movement is always anxious to avoid exaggeration. It is unnecessary, for without it our case is so overpoweringly strong that it must in the end gain the victory.

I am, Sir, your obedient servant,

BENJAMIN BRYAN,

Secretary Victoria Street Society.

20, Victoria Street, S.W., June 5th.

DR. PARVIN ON VIVISECTION.

SOME time back extracts were published in a London journal from an address by Theophilus Parvin, M.D., LL.D., of Philadelphia. As the time and place of delivery were not clearly defined, we caused inquiry to be made, with the result that the extracts proved to be quite authentic, and although the address from which they were taken was delivered as long ago as 1891, we do not think that the important matter which it contains had been previously published in this country. It should be also premised that Dr. Parvin is not an anti-vivisectionist, but a perfectly orthodox and very eminent physician, who, in 1891, was President of the American Academy of Medicine. It was in that capacity that he made

the annual address, in which he surveyed the whole field and claims of the vivisection, and repudiated the latter in regard to surgery of the brain and abdomen, bacteriology and therapeutics. We make the following extracts, which we feel convinced will prove interesting :—

PRESUMPTIVE ARGUMENTS AGAINST VIVISECTION.

"There are certain presumptive arguments against vivisection. If there be a God of love and power, without whose knowledge not even a sparrow falls to the ground,—a God who giveth to the beast his food and to the young ravens which cry; who is good to all, and whose tender mercies are over all His works,—surely it is not in accordance with His character and purposes that animals should undergo cruel tortures for man's benefit. The animal creation has been made subject to man; many of them are our dependents, and some are capable of the strongest attachment to human beings, and become the most devoted friends. Even the wild animal sometimes appeals in its distress for human help. What might not all animal creation become to man if everywhere the law of kindness ruled his action! Physicians, whose very name points to widest sympathy with Nature, ought to be the chief apostles in preventing cruelty and proclaiming kindness to animals as the duty of man,—and therefore must take heed lest the power of their apostleship be weakened by needless, useless, and painful vivisections; for preaching and practice coincide, if good effect comes from the former."

RESPECT DUE TO THE NON-PROFESSIONAL CONSCIENCE.

Dr. Parvin holds it to be the part of wisdom to respect the honest and conscientious protests of good men and women, at least to the extent of abstinence from profitless experiments, and from all avoidable pain to the innocent victim. He says: "The attitude toward vivisection taken by some of the best men of the age is assuredly very hostile. For example, three of the greatest poets of the century—Tennyson, Robert Browning, and Whittier—have condemned it. Chief Justice Coleridge, Phillips Brooks, and Morgan Dix are other illustrious men who have given severe censure. Robert Browning, a few years before his death, said: 'But this I know, I would rather submit to the worst of deaths, so far as pain goes, than have a single dog or cat tortured under the pretence of saving me a twinge or two.' Morgan Dix, in the course of a letter written upon this subject last year, uses the following language: 'I have read accounts of the tortures inflicted in the name of science on the creatures committed to our care or placed in our power by a Divine Providence, and they have made me sick at heart for weeks together. I shall never peruse these frightful statistics again. I have read what arguments are made in extenuation or recommendation of the practice, and their only effect has been to strengthen my conviction that man is capable of becoming the most barbarous and most merciless of all agents.' It is wise for physicians interested in vivisection to recognize that there is on the part of prominent women and men in the laity a strong sentiment of antagonism to experiments upon animals."

NEW BOOKS, REPORTS, ETC.

Three Reasons for Humanity to Animals: An Address to the Barmouth Branch of the Selborne Society. Read May 28th, 1896, by Frances Power Cobbe. Printed by Pewtress and Co., 28, Little Queen Street, London, E.C.

In this interesting and important address Miss Cobbe has gone beyond the advocacy of the anti-vivisection idea to which she has devoted so many of the years of her life, and thus shows that she has no restricted notions of benevolence towards the animal creation. Commencing with a reference to the objects of the Selborne Society, she condenses the definition of those objects into the sentence: "To promote the highest kind of Taste," meaning by that "something even higher than the taste for true and noble Art, namely, genuine delight in the beauty of Nature, as revealed in sea and mountains, trees and flowers, brutes and birds. The joy taken in such things," Miss Cobbe continues, "is assuredly among the purest and loftiest which has been given to humanity; and it is one which, in its religious aspect, lifts the soul of man into a region where he may, in his poor measure, sympathise

with the great Author of all the loveliness of the world." Then on the next page we read that there is required a complement or counterpart to this, which is thus described :—

"But like every true Taste, the Taste for the Beauty of Nature must have, as its complement and counterpart, a distaste (literally 'disgust') for everything unbeautiful; everything which violates and spoils the beauty of the world. As are jarring colours to a painter's eye, and discordant notes to a musician's ear, so to the lover of Nature are ruined waterfalls (like those at Foyer, and at our own Gwynfynedd), and prostrate woods (like those we see now around Dolgelly and Abergwynant), and ravaged wild flowers, and the hateful substitution for such things of iron houses and machinery wheels, flaunting advertisements and tall smoking chimneys. Our love and care for the Beauty implies our desire to stop the destruction of it. In the view, then, of this double character of the objects of our Society, we may parody for it the cumbrous title of a famous old pious Association, and say it exists for the 'Discountenancing of Ugliness and the Promotion of the Love of Nature and Natural Beauty.'"

Miss Cobbe does not go into the morality of sport, but from a Selbornian point of view objects to the marring and mutilating of the beautiful birds and animals by shooting them as a pastime. She justifies the killing of animals for food, but this is to be done in a merciful and speedy way. "But," she exclaims :—

"But, my friends! Real Cruelty—the infliction of torture on any sentient creature—is something very much more serious than the spoiling of Nature's jewels, something worse than an exhibition of indifference to beauty and grace. It is not merely aesthetically barbarous. It is morally wicked."

This is the lesson which in this most interesting address Miss Cobbe sought to support by argument and to drive home.

As to the practice of humanity towards the animal creation we may quote the following twelve points of Miss Cobbe's wide and comprehensive charter :—

"Do we ask: 'How will such Benevolence practically modify our behaviour to animals?' Here are a dozen out of a hundred ways in which it will do so :—

"1. We shall eschew and abominate 'Murderous Millinery'; the slaughter of Birds to ornament women's empty heads, and of Seals to cover their heartless breasts.

"2. We shall likewise eschew and abominate 'Gluttonous Cruelty'; the slaughter of thousands of heaven-soaring larks to provide *entrées* at London dinners,—and the disgusting manufacture of disease in geese, to make *Pâtés de foie gras*.

"3. We shall at once cease to kill Pigeons at shooting matches or sea-birds by the shore, merely for the pleasure of hitting a living target,—and at last we shall give up Field Sports altogether, and let the old Hunter instinct (which once had its rightful place in human nature) die out in the fulness of time. (The charming pursuit of photographing living wild animals in their natural haunts may prove a blessed alternative. With golf and tennis and football and cricket and looting to give them exercise, I do not think the young manhood of England needs to tramp the turnips after the poor little partridges!)

"4. We shall join hands in earnest efforts to improve the methods of slaughter, and of the transit of cattle.

"5. We shall always decline peremptorily to take our place in any overloaded vehicle, or to remain in a cab with a driver who flogs his horse unmercifully; and we shall remonstrate against every act of cruelty we witness abroad or at home.

"6. We shall take pity on stray animals, and creatures in distress, and do the best we can for them; never passing by a lost dog or starving cat on 'the other side,'—like certain priests and Levites of ancient times, or modern ones who placidly observe '*Non e Cristiano*,'—in reply to appeals for pity.

"7. We shall suffer no dog in our household to be kept continually on the chain, like a criminal; or in an unhealthy or dismal kennel where his brave, friendly spirit is broken.

"8. We shall discountenance all caging of larks and thrushes, blackbirds, and other wild creatures; and if canaries and tame mice or rabbits be kept in our houses we shall compel attention to their wants.

"9. We shall often provide food for the birds in winter and water for the beasts in summer.

"10. We shall speak gently to animals and guide them as much as possible without roughness or violence.

"11. We shall labour to instil the love of animals and the sense of the sin and shame of cruelty in the heart of every child with whom, as parent, teacher, neighbour, or friend, we have to do.

"12. Lastly, and above all, we shall strain every nerve and leave no stone unturned to stop Vivisection; which is the crown and climax of Wrong towards animals; in comparison of which all other cruelties are trivial."

We feel sure the request for copies of this pamphlet will

come from hosts of the friends of the cause of kindness to animals.

Messrs. Bell and Sons have sent us further specimens of their "Animal Life Readers," most admirably calculated to fulfil the design with which they have been undertaken. Those before us are four in number, two each for Standards V. and VI. For the former the titles are *Nature's Wonders*, by Edith Carrington, and *Featherland*, by G. Manville Fenn; and for the latter *Standard, Friendship of Animals*, by Edith Carrington, and *Tuppy, the Story of a Donkey*, by an anonymous author, but one well known through former works. They are each and all intensely interesting and well illustrated, and as there can be no doubt that to lessen the amount of cruelty inflicted on insects, birds, and animals, the rising generation must be instructed in knowledge about them, and their sympathies drawn out to lead them to protect instead of to destroy the beautiful beings spread in such rich profusion throughout animated nature, it is impossible not to concede to these books the highest commendation as instruments for the purpose. For instance, the lesson contained in the following paragraph is admirable:—

"Any one who loves animals feels that they are friends, not machines. He knows what a pleasant welcome they will give, in their dumb way, to those they love! . . . No one need be without a friend, no matter how poor, or old, or ugly, or even wicked he may be, if he has a dog and treats him well."—*Nature's Wonders*, page 181.

There is, of course, much more to the same effect in other parts of these books, the plan of which is no less admirable than the way in which it has been fulfilled by all concerned. In *Friendship of Animals* are some references to writers and workers on behalf of animals.

RECEIVED.—*The Homeopathic World*, No. 366 (Homœopathic Publishing Co., 12, Warwick Lane, E.C.); *Our Animal Friends*, Vol. 23, No. 9, May (American S.P.C.A., New York); *What it costs to be Vaccinated*, by Joseph Collinson (Humanitarian League, 79A, Little Queen Street, W.C.); *Report of the Society for the Protection of Animals of Florence, 1895-96*; *The Vegetarian Messenger*, June (9, Peter Street, Manchester); *The Herald of Health*, June (23, Oxford Street, W.); *Shafts, a Paper for Women and the Working Classes*, May (6, Farringdon Avenue, E.C.).

CHILDREN AND ANIMAL EXPERIMENTS.

The following extract from a private letter has been forwarded to us for publication:—

One hot summer evening I was returning home through the fields and saw a number of children, boys and girls, the eldest of them not more than twelve or thirteen years of age, gathered together near a stile; and I surmised, from their noisy merriment, that they were engaged in some pleasant, harmless game. But my surprise was great upon reaching them, to see a poor frog crucified, back downwards, to the flat surface of the left-hand post.

The little creature's limbs had been drawn to their uttermost tension before its tormentors had impaled it with strong pins. Then the victim's chest had been laid open by a *too skilful* young operator, and the several parts kept back by more pins, thus exposing the palpitating heart to full view. The unthinking children were deriving their enjoyment from seeing the little heart pulsating. I quickly killed the frog out of its misery, and learned upon inquiry that the children had witnessed the experiment at school.

One of the boys drew my attention, and said, "There's another on the next post, but Johnny pithed that one, so the heart didn't beat so powerful, but he didn't pith the one you've just killed. You know," he resumed, with quite a confident air, "pithing means to cut the vertebra and spinal cord through, and where there's no nerves, there's no feeling. That is what the teacher tells us."

By judicious questioning I learned further that the instructor of the boys had a small battery at school, and one day "made a rabbit jump, ever so much," by touching it with the wires, and often dissected live frogs and mice, which the boys took him for the physiology lessons.

Then the young operator, Johnny, a boy with a frank, laughing

and honest face, informed me that they could get "Heaps of big frogs in the dyke on the recreation ground near the school." He continued: "I got a tin full of boiling water yesterday and dipped a frog in it, on purpose to see how long it would live afterwards." "How long did it live?" I inquired. "I don't know, sir, for it was time for school again before it *pegged out*, and after it was thrown into the dust-bin it was *kicking a bit*. We often have some real good fun," he concluded.

I gently appealed to the better nature of the children, and explained the difference between fun and barbarous cruelty.

In reply to my remonstrance Johnny coolly informed me that "it was all in the interest of science." The boys' teacher proved to be a personal acquaintance of mine, so I took the first opportunity of mentioning the matter to him. He quietly laughed and admitted that his boys *did* enjoy the experiments. "You see," he said, "I make the lessons interesting."

Another instance of cruel torture which came under my personal notice is, I believe, worth recording. It happened at the same school.

A certain lady teacher, while taking the physiology class of the fifth or sixth standard girls, produced a live rabbit and informed the children she would proceed to demonstrate to them some of the properties of blood.

Naturally the excitable and inquisitive little ones expected to see something startling and watched with eager eyes the several preliminaries the teacher considered necessary.

She called upon a gentle golden haired, blue eyed little creature to come forward and hold bunny. The child, with frightened expression of face, approached and was requested by the teacher "not to tremble," but to hold the rabbit's hind legs fast, as it could not hurt her.

"Are you going to hurt the poor little thing?" the child timidly inquired, whilst the tears trembled on her eyelashes.

"Oh no! It will be dead in a minute," was the answer. The tender little child uttered a cry of affright, and let go bunny's legs.

"Go back to your place," cried the teacher, petulantly. She then informed the class that she desired the assistance of two girls *with nerves*. There were several candidates and the lesson proceeded.

Poor struggling bunny was firmly held, the fur on the right side of its neck was clipped close to the skin, and after giving a basin and a small bundle of twigs to the second girl with the instructions to "keep on stirring the blood to prevent coagulation," the teacher, before the eyes of every girl present, severed the animal's jugular vein with a sharp penknife.

Its death throes were soon over, and when convinced that bunny's arteries were drained, this humane teacher took the basin and whisked the reeking blood as one whisks an egg. After a few minutes she held up the twigs, to which hung numerous glutinous strings, and informed the girls that the substance they beheld was the true fibrin, and caused newly shed blood to speedily congeal into a dark mass.

I have known the same teacher to both drown and poison rabbits, and vivisect frogs before the class, to demonstrate different theories to children who in their simple ignorance quickly became accustomed to the teacher's heartless cruelties and viewed the experiments with perfect indifference.

Obituary.

MRS. SAREL.

The lamented death of Mrs. Sarel, of Drayton Gardens, is a serious loss to the Anti-Vivisection cause, of which from the first she was a steady, zealous, and exceedingly intelligent advocate. Her good sense, prudence, and sterling character rendered her a very valuable ally. She was one of a numerous company of whom the world at large hears little, who, each in his, or her, own circle, and neighbourhood, is awakening the public mind to the truth concerning Vivisection, and the public conscience to the urgent duty of putting an end to the practice.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, WEDNESDAY, JULY 1st, 1896.

WHY VIVISECT?

"You prove too much!" is an objection commonly made when our medical supporters have shown conclusively that vivisection has never done anything for the advancement of medicine at all proportionate to the cruelty it has involved. "You ask us to believe that men of the highest scientific attainments, and of the purest moral character, spend their lives and devote their energies in researches involving the utmost skill and the practice of the most indefatigable industry, when they must be at least as well aware as yourselves that their energies are wasted, and their industry doomed to inevitable failure. You demand too much of us; you ask us to believe that the Fellows of the Royal Society and the Members of the Physiological Association are lunatics, with a passion for cruelty!" Our readers must have heard all this a hundred times, and possibly some of them have not found an answer so readily or so convincing as they could have wished. We can imagine a new recruit to our ranks, who has been moved by the moral strength of our position to devote himself to our holy work, confronted by the feeling that the Professor whom he heard lecture at the Royal Institution, and the eminent Physiologist at his University, can hardly be the bloodthirsty idiot who cuts up living animals with no more reason than a schoolboy tortures a cat. No doubt thousands of intelligent and humane persons are held back from our movement by considerations such as these. "It is horrible, it is wicked, it is probably useless," they are willing to admit; "but there must be something behind it all that we have not been told; these men may be wicked, but at least they are not fools." By no means, we reply. We have never said that their energies are aimless, although so far as medicine is concerned their labours have been fruitless; we know these vivisectors, some of them have been our teachers at University and Medical School, and we perfectly well understand their aims and the object of their researches. The glorification of themselves and the advancement of their position will account for all.

Let us explain. Science is one thing. Medicine is another. There is no necessary connection between the

two. A savage may cure a philosopher, and do his work as well or perhaps better than many a President of the College of Physicians. Father KNEIP, of Bavaria, is reported to have cured, by his cold water system, thousands of patients who never derived any benefit from orthodox medical treatment. Science, therefore, is Science. The Healing Art is an Art, and often nothing more. But Science nowadays rules the Western world, and has taken the place, to a large extent, of religion. "Tell me no legends, quote me no poetry," exclaimed a scientist at a hospital. "I want facts, and facts only." Some one asked of his teacher of physiology, "Do you like Keats?" "What are *they*?" the researcher demanded. His mind had no place for the beautiful; facts, the accumulation of observations, filled his waking life. To such men no labour is too great, no patience too much, to acquire a new fact. No question of utility, "no mean and paltry looking forward to practical benefit" interferes with his work. To him there is no small nor great, and the membrane covering the eye of a stickleback is of equal importance to the convolutions of a human brain. To discover some new thing, to add one grain to the sum of his knowledge, this is his aim. He is not by any means so unselfish as he seems. He has his eye on the recompense of reward; only that reward is not the discovery of a new remedy, but the distinction of having advanced Science—his science—a hair's-breadth onward. This brings fame, gold medals, diplomas of honour, well paid positions, world-wide distinction. One vivisector was honest enough to admit that he had no thought of medical progress in his investigations. HERMANN, of Zurich, said—"The advancement of our knowledge, and not utility to medicine, is the true and straightforward object of vivisection. No true investigator in his researches thinks of the practical utilization. Science can afford to despise this justification with which vivisection has been defended in England."

SCHIFF performed a great number of experiments relating to the erection of the hairs on the cat's tail. This erection of hair, as seen in an angry cat, can be produced by stimulating electrically the spinal cord both before and after curare paralysis, but he discovered that the effect ceases on cutting the lumbar sympathetic nerve on both sides. This is a fact, and SCHIFF discovered it. It has no more bearing on Medicine or Surgery than on the Transit of Venus; it is an addition to scientific knowledge, and it helps to make SCHIFF—SCHIFF; that is all. Mr. LANGLEY described an experiment on the spinal nerves which he stimulated in the spinal canal, whereby the hairs on a portion of the skin were moved. This was Science, but it was not Medicine. Dr. F. S. LEE experimented on Equilibrium in Fishes, and the compensating movements made by the eyes and fins of *Galens Caris* were of the same class. Other cruel researches are simply chemical; thus LEWASCHEW starved dogs for five days for purely chemical research. CARVALLO and PACHON starved pigs for five days, giving them neither food nor water, and found quite the contrary to what have been called the

classical experiments of SCHIFF and HERZEN. This was neither Medical nor Scientific. It was meant to be the latter, but was probably only due to that passion for contradicting and upsetting a brother researcher, which seems the predominant one in vivisectors. No! Vivisectors are not fools; it pays, and pays well, to prove a brother vivisector a fool, and so destroy him, like certain priests of Pagan Rome, who could only succeed their predecessor by murdering him.

FAILURE OF MEDICAL EDUCATION.

THE number of men in the ranks of the medical profession increases at a great rate, as it is impossible not to see in going about the Metropolis, where consulting rooms and "dispensaries" seem ever more and more numerous. And yet it appears constantly to be made increasingly difficult to become a doctor, for we learn from a speech made by Mr. PRIDGIN TEALE, of Leeds, before the General Medical Council on the 2nd of June last, that in 1894 out of 2,612 examinations by the Conjoint Board there were 1,017 rejections. Mr. TEALE cited these figures as an illustration of the wasteful cost to parents of the system of examination for the medical profession as at present carried on. With that side of the subject we have nothing to do, but our regard must be paid to the question whether the education given to candidates for medical diplomas is, from a public point of view, what it ought to be.

It is several years now since we heard Mr. LAWSON TAIT remark that the first two years in the career of a student for the medical profession were wasted. There is now no apprenticeship, in the course of which a beginner used to be admitted to witness the practice of a doctor at work. Students enter at once into the medical school, where, according to Mr. TEALE, they "are discouraged from entering the wards of a hospital or the operating theatre during their first two years." As an alternative they are instructed in "physiology," and at the end of their second year are examined on that subject. Mr. TEALE severely criticised the form of this examination, and quoted some of the questions put, which were as follows:—"Explain the terms myopia, hypermetropia, astigmatism. How would you correct these errors of refraction?" "Describe the appearances of the interior of the larynx as seen by the laryngoscope. What changes are noticed in phonation, and how are they brought about?" "What sounds can be heard on applying the ear to the chest? Explain exactly how they are caused."

For young men who have never been permitted to study a human patient, whose researches have been confined to the dissecting room, and perhaps the vivisectioning laboratory, it will be seen that these questions are well calculated to expose their ignorance of what they have never been taught, except perhaps from books. Mr. TEALE remarks upon them in these terms:—"For my part, I do not see how these questions can be answered, except by means of mere verbal cram, by those who cannot have worked clinically at 'refraction,'

'laryngoscopy,' and 'auscultation.' It is, however, when we come to the rather fancy subjects, such as hygiene and medical jurisprudence, that we meet, in the later stages of medical education, with the most questionable questions. In hygiene, for instance: 'What do you understand by the expressions "effective population," "dependent population," "density of population?"' 'What impurities of a deleterious character are found in bread?' 'How ought a hospital to be constructed in order that each patient may have an efficient supply of air?' "All questions of importance, but all seeming to us, as they did to Mr. TEALE, entirely irrelevant as tests of the fitness of a man for the medical profession.

There can be no question that the numbers of the profession increase too rapidly, and these sort of questions may have been introduced advisedly as barriers to create falls. However that may be, it seems that some of those who get through are only badly fitted for the work of a general practitioner. Mr. TEALE pointed out that there was a deficiency in clinical training, and said:—"I frequently hear bitter complaints from medical men in country places who find their newly-fledged assistants woefully deficient in their fitness and adaptability to practice. They can talk about bacteriology and recondite neurology, but they have not the capacity for simple observation of the cases that come before them, or the power of turning to profitable use the knowledge they have acquired during their career as students."

To us it is decidedly a question—and that was the question raised by Mr. TEALE—whether the wrong kind of knowledge has not been given to them? As will be seen, two imposing and fashionable "ologies" are mentioned as having been imparted to them; but beyond that, although they may have managed to pass their examinations, it almost seems as if they had only received their diplomas in order to admit of their beginning the real study of the actual work of a medical man. In short, the apprenticeship which used to come in front of student days now follows in their rear.

This is a matter in which the public, from whom the ranks of the patients of medical men are recruited, are deeply interested. Each new generation of doctors seems at the outset to be worse fitted for its work, under what Mr. TEALE termed, "our present degenerating system," and although so many fail to pass the tests imposed, there is no guarantee that those who succeed in passing are as efficient as they ought to be. And in the last resort the responsibility for this deplorable state of things seems to be with the modern craze for diverting study to animals—to animals often so cruelly abused—instead of concentrating it upon those to whom the future doctor will have to minister, sick men and women. The true physicians, those who are true to themselves, their profession, and their patients, have begun to find out where the deficiency lies, as the following statement quoted by Mr. TEALE from Professor MITCHELL BANKS, will testify:—"When I began teaching in Liverpool the primary examination of the College of Surgeons con-

sisted of little but anatomy, the physiology required being small in amount. The students did a good deal of dissection, and I was often surprised at the extent and accuracy of their anatomical knowledge; but for many years they have been steadily deteriorating in their knowledge, and I have been quite pained to note that, when they came to be dressers in hospital their whole knowledge had vanished in a few months. It is the same as regards physiology. One department alone—that relating to the nervous system and to electrical experiments therein—is now more extensive than the entire subject was in my student days; but what is the result? Endless time is spent in galvanizing frogs, and making tracings on drums, whilst only the other day a physician complained that his clerks seemed to be ignorant of the simplest functions of the liver and kidney."

Now, all this is deplorable from a public point of view, and it is a good thing that members of the profession are beginning to find it out and admit it. The public who pay in a variety of ways for right knowledge on the subject of their ailments and treatment ought to have what they pay for so far as it can be secured, and when members of the profession themselves put their finger on the plague-spot there is hope of amendment. When that amendment takes place—and the subject was referred by the Medical Council to a Committee for consideration and report—it must include the elimination of a great deal of the wasted physiological teaching from suffering animals that at present obtains, and set up what is the real need and desideratum, a system of genuine medical education.

CORRESPONDENCE.

THE PASTEUR TEST FOR RABIES.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Now that public thought is somewhat concentrated upon the question of treatment for rabies it may be as well to draw attention to a fact in this connection that has hitherto been almost entirely overlooked alike by the advocates and opponents of anti-rabic inoculation. In cases where someone has been bitten by a dog or other animal, and rabies is suspected, the creature is forthwith destroyed and sent off to the laboratory in order that the Pasteur test for rabies may be applied. The test is that of inoculating live rabbits with the supposed rabies virus, which is thrown direct upon the brains of the animals by the process of trephining. The result is that the rabbits become rabid, a conclusive proof, we are told, that the suspected animal was mad. Now, the fact is, this test is one which is very much called in question by many experts of good repute. Dr. Dolan, of Halifax, writes:—"M. Pasteur produced a disease in rabbits which he called rabies. The same kind of affection in rabbits can be produced by injecting almost any kind of diseased material into the same region." Dr. Spitzka, of New York, inoculated rabbits with mere matter and set up similar symptoms to those which Pasteur says can only be produced by rabies virus. Dr. Herman Biggs, of the Carnegie Institute, is another authority who has spoken to the same effect. There is supposed to be "a microbe of hydrophobia," but no one has yet been able to isolate it. One thing is certainly proved, and that is that "street rabies" and laboratory rabies are not one and the same disorder. But of course the Pasteur authorities will not admit this, for such an admission would be tantamount to saying that their creed was bottomless.—Faithfully yours,

JOSEPH COLLINSON.

Humanitarian League, Lincoln's Inn, W.C.

HOME INTELLIGENCE.

LONDON.

SCENE IN HYDE PARK.—A VIOLENT VIVISECTIONIST.

On Saturday, May 30th, Mr. R. S. Wood joined Mr. Arthur Westcott in Hyde Park to assist in holding a meeting. The result was a good meeting, with opposition and some excitement. Mr. Ferrier, a friend of the Cause, acted as chairman, and in a short time an audience of quite 500 people assembled. Mr. Wood spoke first and with good effect, notwithstanding the fact that he was continually interrupted by a person understood to be a doctor. When Mr. Wood had finished speaking, the Chairman offered to this doctor the use of the platform, adding that Mr. Westcott was prepared to meet him on equal terms. The offer was accepted and the interrupter became the speaker from the platform. Losing his temper he abused everybody connected with the Anti-vivisection movement in what used to be considered unprofessional and ungentelemanly language, but which is now the frequent resort of our opponents. Messrs. Horsley, Ruffer, and others were lauded, and described as the gentlest and kindest-hearted men in existence; as "men who spent their lives, and wore themselves out in the service of mankind." Mr. Westcott, in a temperate and effective reply, refuted and disproved the "arguments," to the great delight of the audience, which was largely sympathetic to our cause. The doctor became so very angry and abusive that he had to be frequently reminded that he belonged to a profession whose members boasted of their honour. He was led on to make a second attack, when he floundered into fresh difficulties. He admitted that Mr. Westcott's arguments were in the main correct, and that he could not deal with them; that experiments on one class of animals would not show what would take place if the experiment were performed upon an animal of a different species; that experiments were "only suggestive," and "could only be so;" that notwithstanding all the inoculation experiments there was no known cure for any disease of microbic origin. The pro-vivisection champion, of course, denied that hospital patients were ever experimented upon. But that the audience would not accept the statement they plainly showed; some expressing their feelings very strongly. The doctor again got angry, shook his fist at Mr. Westcott, and stammered with excitement. Then, after more abuse, he jumped from the platform, and left the meeting with his friends. Early in the debate Mr. Westcott announced his intention of lecturing in the Park on the following Monday, but on that day his truculent opponent was conspicuous by his absence. This was unfortunate, as the scene he created had aroused a great amount of interest in the subject. During the evening of the debate considerably over 1,000 persons must have collected, and at 11.20, when the proceedings ended, there were still quite 500 persons present. A very large parcel of literature was distributed during the evening.

THE LONDON ANTI-VIVISECTION SOCIETY.

A large number of ladies and gentlemen opposed to the practice of vivisection met on Wednesday, June 18th, at St. James's Hall, for the purpose of celebrating the twenty-first anniversary of the above society, under the presidency of Surgeon-General C. A. Gordon, C.B. There were also present Mr. J. G. Swift MacNeill, M.P., Colonel Waterston (Secretary Scottish Society), Mr. R. Somerville Wood, Mrs. T. R. Monro, Dr. A. Wall, Dr. J. H. Clarke, Col. Benson, Captain Toynbee, and the Rev. R. C. Fillingham. Letters of regret for non-attendance were read from the Duke of Portland, Lord Coleridge, Sir Henry Hawkins, and many others.

The report for 1895 stated that considerable progress had been made towards the attainment of the object of the Society, viz., the total abolition of the practice of vivisection. The total number of experiments on living animals made under special licenses and certificates in 1894 was no less than 3,104, and the Society had endeavoured, by the distribution of literature and other means, to impress on the public the extent to which vivisection was practised in England.

The CHAIRMAN, in the course of his address, said he was glad to be able to congratulate the Society on the attainment

of its majority. For a considerable number of years he had carefully compared the statements of fact made by the advocates and opponents of vivisection, and he had come to the conclusion that, on grounds of utility and science alone, the experiments made on living animals were unjustifiable. The conclusions drawn from the state of animals under experiment were as unreliable as the evidence drawn by the Inquisition from its victims on the rack.

Colonel WATERSTON moved:—"That this meeting, convened by the London Anti-Vivisection Society for the total abolition of vivisection, protests in the strongest manner on true scientific, humanitarian, and moral grounds, against all experiments on living animals." Kindness to animals was, he said, regarded as an obligation, but, in spite of this, man had usurped a position over lower animals which God Almighty never intended, and changed their condition to one of anguish and of pain. At that time experiments were being made too dreadful to describe, and they were there to protest against anything of the kind.

Dr. A. WALL seconded the resolution, which was supported by Mr. CHARLES L. MONEY, and adopted.

Mr. SWIFT MACNEILL, M.P., moved a resolution pressing on all Members of Parliament the urgent need of taking measures to bring about the total prohibition of vivisection.

The Rev. R. C. FILLINGHAM and Mr. R. S. WOOD supported the resolution, which was adopted.

A vote of thanks to the Chairman and speakers ended the proceedings.

VIVISECTION AT THE WOMEN'S LIBERAL FEDERATION.

MR. HORSLEY IN THE MINORITY.

The appearance of a man at a Council Meeting of the Women's Liberal Federation seems in itself incongruous, but the appearance of Mr. Horsley, the stigmatiser of women as the advocate of any cause at a women's meeting is more incongruous still. Nevertheless the person in question appeared as a delegate and a speaker at the sitting of the Council of the Women's Liberal Federation held at Westbourne Park Chapel, on the 16th June last. According to an editorial note in the *Daily News* on the following day, "Mr. Horsley is a man, and not a brother, an ardent supporter of vivisection, the discourteous opponent of Miss Cobbe, and one open to the suspicion of reactionary views in politics. He is, in fact, everything which the Women's Liberal Federation is not. One lady charged him with being a Tory, another demanded the name of the association which had sent him there, and a third proposed to submit that association to an immediate vote of censure. He had beguiled East Worcestershire out of the nomination; and there was nothing for it but to allow him to proceed."

The prohibition of vivisection was the first business at the afternoon sitting of the Council on the day above named.

The subject was introduced by Mrs. STEWART BROWN, who moved the following resolution:—"That this Council is of opinion that the best interests of the community demand the total prohibition of vivisection (experiments upon living animals) by Act of Parliament." Mrs. Brown, in an able speech, pointed out the confusion resulting from experiments. She quoted the names of great scientists who admitted that this confusion existed, and must exist. She quoted from the writings of Prof. Charcot to show that he considered the clinical method the best for studying human diseases, and asked the audience to hear Professor Horsley's defence, but to pay no attention to it, as he came there as an interested party. He would, of course, try to make them believe that vivisection as practised was a very different thing from what it was represented to be, but they must not overlook the fact that Mr. Horsley was an experimenter, and would try to present himself and his case in the most favourable light. She therefore asked them to vote for her resolution.

Mrs. CHAS. MALLETT seconded the resolution. She quoted experiments of Rutherford to show that vivisection was inseparable from cruelty. She was not satisfied with the inspection, and looked upon the returns of the Inspectors with suspicion. She begged them to support the resolution on moral grounds.

An amendment was moved by East Worcestershire, who sent Miss E. M. Finney to support it, and Mrs. Moore to support her. Miss Finney's remarks were of the usual

nature, such as "vivisection had been the means of saving thousands of lives"; "they must not listen and allow themselves to be carried away by stories of what was said to be carried on in vivisection laboratories"; "they had been told that so many experiments were performed last year—they must not forget that the greater part of those experiments were simple inoculations, which caused little or no pain to the animals"; "they were assured by the Inspectors that antiseptics were always used, so that the animal did not suffer," and more to the same effect.

Mrs. MOORE referred to the cruelties of sport, and said that all who supported the resolution must be vegetarians; they must also abstain from using animals for any purpose.

Two other lady speakers followed, and then Professor HORSLEY was called on. He was greeted with cheers and loud hisses, and looked somewhat limp when he reached the platform. He began by referring to the discussion at the Church Congress. He thought people were anxious to know the facts, and he was there to inform them that the medical profession were not divided on this question. The question had been settled by the profession long ago. Resolutions had been passed at two great Medical Congresses, the last one at Nottingham. He thought that these resolutions settled the whole matter. It was not for lay persons to pass opinions on professional subjects. In regard to Charcot's statements, he was very sorry to have to go against his old teacher; but Charcot wrote that paper in which he said that the clinical method was the only safe method for the study of human diseases, under a very peculiar feeling. He was writing under a feeling of patriotism; he was anxious to claim these advances for the French, when the honour of the discoveries were due to the Germans. He (Professor Horsley) had established this in his lecture at Nottingham. He admitted that the clinical method was valuable, but it was not the only method. Sir Charles Bell, who made such great and valuable discoveries, made them through experiments upon living animals, although, after he had made the discoveries, he denied that such had anything to do with them. Still the fact remained that in his earlier writings he did admit that painful experiments played an important part. As one who had worked under the Act now in force, he could say that the Act was not satisfactory. It was an old Act, and it did not meet the present requirements; it was very much behind the times. The Inspectors always did their duty, and he would like to compel those who made allegations against them to prove them before a Committee of Parliament.

Scarcely any applause followed this very feeble defence, and then Miss CONS announced Miss HELEN GLADSTONE, who said, "As one who has been vivisected, and believing that vivisection of animals is good, I have no right to vote. I have nothing to say about the value of vivisection, but have had performed upon me an operation which I am informed could only have been performed after experiments upon the lower animals; therefore I could not vote against the practice."

Miss BALGARNIE said she was opposed to vivisection on all points.

Miss JESSIE CRAIGEN spoke, and replied effectively to Professor Horsley point by point. The meeting was very demonstrative at times, and Miss Craigen was cheered again and again.

The resolution, coupled with amendment 3 on the paper, to the effect that "vivisection involved gross cruelty, and led to experiments on patients in hospitals," was then put, and carried by a large majority.

THE ELECTORAL ANTI-VIVISECTION LEAGUE.

The first meeting of the Electoral Anti-vivisection League was held at 32, Leinster Square, London, W., by kind permission of Mrs. Carden, on Saturday afternoon, June 6th. The Rev. J. Fleming Shearer presided over a crowded audience. Speeches were delivered by Miss Whitehead, Mrs. Ellis Cameron, Miss Abney Walker, Mrs. McKinnell, Mr. R. S. Wood, and Miss M. A. Woodward. The report was adopted, the officers reappointed, and resolutions passed condemning the practice of vivisection and calling for its prohibition. Mrs. Carden was cordially thanked for the use of her rooms, and for her hospitality in providing tea and coffee, which were much appreciated at the close of a sultry afternoon.

BRIGHTON.

The Rev. W. N. P. Beebe (Vicar of St. Luke's, Brighton), presided on Wednesday evening, May 27th, over a public meeting in support of the abolition of vivisection, held in the King's Apartments, Royal Pavilion. The meeting was held under the auspices of the London Anti-Vivisection Society and had been organized by the Brighton Working Men's Branch. It was well attended, several clergymen being present, as also were Miss Jessie Craigen and Mr. Arthur Westcott, who both delivered addresses on the occasion. A resolution was carried in the following terms:—"That this meeting, having heard the addresses in explanation of vivisection, is of opinion that the practice is cruel, immoral, and misleading, and as it tends directly to experiments on human beings, is one that ought to be summarily abolished; and that copies of this resolution be forwarded to the Members of the Borough.

BRISTOL.

Since Mr. Williams's return from Kidderminster several successful meetings have been held in the Bristol district, at which resolutions demanding the prohibition of vivisection by law have been passed, and large numbers of pamphlets have been distributed at open-air meetings during the fine weather. In connection with the Mercy movement, in the city, Mr. Williams has given several addresses to the young, illustrated by lantern slides given by the Ladies' Committee of Mercy Work among the young, and by the Humanitarian League. These addresses, which have been successful, form an excellent method of training the young in their duties to animals.

KIDDERMINSTER.

Mr. T. A. Williams, of Bristol, it is announced in *The Shuttle*, a local journal, of June 13th, has been delivering addresses in Kidderminster, and a good deal of interest has been awakened. At some of his meetings a wish was expressed for the formation of a local society. Mr. Williams has promised to lay the suggestion before the leaders of the movement. On Monday he addressed two meetings near the Rowland Hill memorial, one at mid-day and the other during the evening. The latter was largely attended. After an exhaustive address occupying more than an hour, and illustrated by some large diagrams, the following resolution was proposed and carried:—"That this meeting is of opinion that the practice of vivisection is cruel, that the results are much disputed by high medical authorities, that the practice becomes a danger to hospital patients, and ought therefore to be prohibited by law."

THE SCOTTISH SOCIETY.

EDINBURGH.

The annual sermon, under the auspices of this Society, was delivered in the Buccleuch Parish Church, on Sunday afternoon, May 24th, by the Rev. John Camphill, before a good congregation.

LEITH.

On Sunday afternoon, June 7th, the Rev. John Dickson preached in St. Ninian's Church, Leith, a sermon under the auspices of the Scottish Society for the total suppression of vivisection. The rev. gentleman took as his subject of discourse "Cruelty to Animals." In spite of the unpropitious weather there was a good congregation, and at the close of the service pamphlets bearing on the subject were distributed.

HIGH-PRICED SCIENCE.—It is announced from New York, under date of May 16th, that thirteen children, bitten by an alleged rabid dog at West Hoboken, had been sent for treatment at the Pasteur Institute in that city. They were not treated, however, and the despatch proceeds:—"They were taken there, but the physicians of the institute informed them that there would be a charge of \$1950 for the lot, of \$150 for each case. Hoboken had not seen fit to give the institute an appropriation. Nearly all the parents of the little victims are in poor circumstances and cannot afford what they consider is an exorbitant charge."

FOREIGN INTELLIGENCE.

UNITED STATES.

The bill presented to the Massachusetts Legislature giving permission to an agent of the S.P.C.A. to be present at vivisectional experiments in colleges and universities has been defeated, through the opposition of vivisectionists and medical men.

The New York State Anti-Vivisection Society, organized for the prohibition of vivisection and dissection in schools, has now re-organized for the total abolition of vivisection with the following officers: President, John Vedder, M.D.; Vice-Presidents, Rensselaer Potts and Benjn. M. Coon; Secretary, Miss Anna Sargent Turner; Treasurer, Miss Grace F. Reed. The five officers comprise the Executive Committee. Annual membership, one dollar. Arrangements are made for a printing press. Success attend our vigorous young ally!—*Anti-Vivisection.*

PROGRESS OF LEGISLATION AT WASHINGTON.

The following extremely satisfactory letter has been received from the leader of the Washington Anti-vivisection Society:—

"Washington, D.C., 1708 Second street,

"May 14, 1896.

"You will be glad to hear, that as far as our Bill has progressed, it has been successful.

"It went first before the 'Senate Committee of the District of Columbia.' A Sub-committee was appointed from that Committee to consider the Bill. We had a hearing before the Sub-committee, where we were met by our opponents, the Surgeon-General of the Army and others.

"The Chairman of the Sub-committee, Senator Gallinger, of New Hampshire, is wholly with us. I wish we might have had a great audience at the hearing. Our speakers were very strong and our opponents very weak. They hardly knew what to say. We had amended the bill to exclude interference with simple inoculations, so that their one plea of 'Anti-toxin' was no longer available.

"The upshot has been that the Sub-committee, having decided upon the merits of the Bill and brought it before the whole Committee, they have reported unanimously in favour of it.

"Nothing more can be done until next year, but this action, made in spite of all sorts of protests by scientific bodies over the country, has given the measure *prestige*, and will bring it next year on to the floor of the Senate, where we expect to have a good deal of strength.

"The reason why nothing more can be done at present is because Congress is hastening to adjournment, which is expected in a few days.

"Our opponents complain that if the Bill passes in Congress, every State will come up to its Legislature with a similar Bill—which is precisely what we expect and intend! In fact, I felt like urging them not to derange themselves because the States will do that *anyway*!

"I should have said that our friend, Senator Gallinger, is the only Physician in the Senate, and, being specially informed, could not be hoodwinked by the specious claims of 'scientists'—

"Believe me, cordially yours

"MARY HORNE TOTTEN."

From a newspaper cutting of a later date, we learn that the provisions of the Bill are: (1st) For the use of anæsthetics in all painful experiments on living vertebrate animals, the so-called inoculation experiments, tests of drugs and medicines and cases of recovery from surgical procedure being expressly exempted from this requirement; (2nd) for the licensing of all experimenters by the District Commissioners, except those who are duly authorised officers of the Government of the United States or of that of the District of Columbia; (3rd) for the prohibition of vivisection in the public schools and in exhibitions for the general public; (4th) for the inspection of all places of experiment by inspectors to be appointed by the President of the United States.

THE CONTEST WITH VIVISECTION AT BOSTON.

There has been a public hearing at the State House on the

Massachusetts Bill, promoted by the New England Society, founded by Mr. P. G. Peabody, and we have received prints of a paper in which it is related that:—

"Perhaps the quibbling propensity of vivisectionists has never more plainly appeared than during Mr. Philip G. Peabody's cross-examination of Dr. Henry Bowditch and Assistant Professor William T. Porter. Mr. Peabody's point of attack was the specific statement that no painful vivisection had occurred at Harvard, made in the now notorious manifesto published in the *Transcript*, of Boston, on July 13th last, written and signed by the Assistant Professor Porter, and vouched for by five others, one of whom was Dr. Bowditch. Dr. Bowditch claimed that this statement was not made in the paper, and that the previous part of the paragraph showed this, whereupon Mr. Peabody read the entire paragraph, which we reproduce below, merely remarking, that the first part of it has no more to do with the denial of painful vivisection, which is certainly specific and precise, than the man in the moon.

"The third class of vivisections is that in which no narcotic is given. Many operations require no anæsthetic, because they inflict little or no pain. An example is the injection of diphtheria toxin into horses, in order that the serum of their blood may be used to destroy the diphtheria bacillus in the very tissues of the sick. Other operations of this class do cause pain. *Painful vivisections*, when made at all, are made for the sake of determining functions that are temporarily suspended by narcotics. Here truth is gained at the expense of suffering, because there is no other way. *Such investigations are rare. None such* have been made in the Harvard Medical School, within our knowledge." (Italics are ours.)

"The situation was very embarrassing to the witnesses; they both tried to show that the meaning of the sentences, which we have printed in Italics, was changed by the previous part of the paragraph; finally, Dr. Bowditch showed a disposition to beg off, claiming that although he had vouched for the article, he had not written it. When Assistant Porter's turn came, he took his cue from Dr. Bowditch; but Mr. Peabody thereupon, for the second time, read the entire paragraph, whereupon Assistant Porter took the other horn of the dilemma, and without admitting in a straightforward way that he was trapped, began to claim that the many agonizing experiments which he confessed having made, in the *Journal of Physiology*, without the use of anæsthetics (except at certain parts of the experiment, to prevent struggling,) were not really painful, because he had used anæsthetics, which, however, in his own account, he did not claim, except as stated; the fact, of course, being that his original account in the *Journal of Physiology* was true, that anæsthetics were not used throughout, and that he claimed to have used them, because confronted with his denial of all painful vivisection; this view of the case is borne out, by admission that his rabbit was 'very lightly chloralized, not over one-tenth gram'—which would be unnecessary if it was anæsthetized."

GERMANY.

The Freiburg Society for Protection of Animals, founded two or three years ago by Miss Davidson and Miss Reid, is, we rejoice to learn, working very successfully and zealously under the director, Dr. Riedlin, on sound anti-vivisection lines. The following advertisement appears at regular intervals in the Freiburg papers:—

"APPEAL AND WARNING.

"Dogs and cats are often bought by dealers for the purpose of vivisection, i.e. 'scientific torture' in the physiological laboratories. Any person who desires to be rid of his beast, and wishes to give it a quick and painless death, free of expense, will please communicate with the Director of the Society for Protection of Animals, Dr. Riedlin, Carthausstrasse, 9."

The following items of news are taken from the *Thier-und-Menschenfreund*:—

"Some time ago the Dresden International Society presented a petition against vivisection to the German Reichstag. Its example has recently been followed by the Wurtemberg branch of the Society, and Dr. Förster, the reporter of the Commission appointed to consider the subject of the petition, has now handed to the German Chancellor a report thereon, which will serve as a basis for any change in the law that may be decided upon."

The *Thier-und-Menschenfreund* publishes long extracts from the report of the Berlin Society for the Prevention of Cruelty to Animals. The work of the society covers a very large field, and includes, we are pleased to see, anti-vivisection. Special attention is paid to instructing the young in the principles and aims of the society. The ordinary subscriptions of the members in 1895 amounted to about £600; but two members, Mr. and Mrs. Beringer, made donations in

addition to the extent of about £1600. The greater the amount available, however, the greater the demands upon it, and it is important that friends should not relax their efforts or lessen their subscriptions.

HUNGARY.

On July 15th and three following days a very important Congress of Societies for Protection of Animals will assemble at Buda-Pesth. The delegates will represent some hundreds of such societies—English, Austrian, German, Swiss, etc. It is expected that a lively discussion will take place on the question (mooted successfully from our side at the last Congress held at Berne), "whether anti-vivisection ought to form part of the programme of all Societies for Protection of Animals?" The problem is almost ludicrous in its simplicity, and might be compared to a similar question put, we may suppose, to a Congress of Temperance Associations, "Ought absinthe and brandy drinking to be countenanced by teetotal societies?" We know unfortunately, however, only too well that a large proportion, if not a majority, of the Societies for Protection of Animals do refuse to make any effort to protect them from the worst of all the dangers to which they are exposed; and that some of these Associations actually have for their leading officers and presidents, Vivisectionists of the most remorseless character—such, for example, as the late Dr. Ludwig, President of the Leipzig Society for Prevention of Cruelty to Animals, who was head of the largest physiological laboratory in Europe, whence two hundred young vivisectionists have gone forth to the work of torture throughout the world. The irony of the situation is truly *sanglant*! In view of the probability of such debate, and of voting upon it, Dr. Berdoe will proceed to Buda-Pesth as delegate of the Victoria Street Society, and of the Florence, the Bristol and the Irish Societies, and we understand that at least two or three other English and probably Scottish representatives of our cause, with Mr. Peabody as representative of his own (New England) Society, will attend the Congress.

SAN REMO.

Our hon. correspondent, Madame Van Eys, writes:—

"I have just received an interesting little publication from one of the well-known doctors of San Remo. It touches on many subjects, the Pasteur cure for one, and in a note, p. 25, the following occurs:—'Speaking of the anti-rabic cure, we must mention a singular fact which happened some years ago in Milan, and which was spoken of with much indignation by medical and non-medical papers. A poor dog-catcher of Milan, who had been several times bitten by the dogs, but without any consequences, was bitten again by two dogs and obliged to undergo the Pasteur cure, on penalty, if he refused, to lose his employment. The dog-catcher, so as not to lose his place, which for him meant his bread, reluctantly obeyed and submitted to the operation, with the presentiment that he would die. In fact, hydrophobia declared itself during the treatment, and the man died. The two dogs, which until now had been kept in observation to make out whether they were rabid or not, disappeared as soon as it was made known that the poor dog-catcher had succumbed.' Another extraordinary case, worthy of notice, happened about a year ago, concerning a man named Pio Ruffini, of Rocca di Papa, who was supposed to have died of hydrophobia at the hospital of Sant Antonio, in consequence of having been submitted to the anti-rabic cure because he had been bitten by a dog, which dog, according to Dr. Medichini (the doctor of the place where the man lived), and according to many other people, was not mad. And, indeed, Dr. Medichini having afterwards sent the head of this dog to be examined by the Bacteriological Institute of Rome, this learned institution distinctly confirmed the opinion of Dr. Medichini."—*La Tuberculosis Polmonica, il Vaccino e la Vaccinazione obbligatoria. (Consumption, vaccine matter, and compulsory vaccination)*—By Dr. F. Onetti.

INDIA.

HAFFKINE INOCULATIONS COMPULSORY.

A correspondent writes to a Calcutta daily:—"A great panic has been caused among the inhabitants of Naihaty and Bhatpara in consequence of the introduction of the

system of Dr. Haffkine's inoculation, as cholera preventive, in those places. The local municipality and the police will, it is stated, see that the system finds favour with the people."

A native Indian medical man of Calcutta writes, lamenting the fact that the establishment of a Pasteur Institute in that presidency is being pressed forward, and that the Municipal and District Boards are making grants towards it, while they still lack sufficient funds for legitimate public works. "Poor India," he remarks, "is now turned into a private laboratory of the foreigners, and no one is appointed to see what they do. This system of inoculation will create nothing but new forms of disease, hitherto quite unknown to the medical world, and we therefore protest to our Government at home against the introduction of any system of Pasteurian inoculations."

DEATH OF A PASTEUR PATIENT AT STOCKPORT.

The Stockport correspondent of the *Manchester Courier* reported in the issue of that journal for June 23rd, the result of inquiries specially made the day before into the circumstances attending the death of Thomas Daniel Lambert, cotton operative, aged 20, of Fox Street, Edgeley, Stockport. It appears that Lambert was one of five persons bitten by a dog suffering from rabies on March 4th, 1895. All five were sent by the Stockport Corporation, in charge of the Medical Officer of Health (Dr. Charles Porter), to the Pasteur Institute, and after being treated there for three weeks returned home. On Friday morning, the 19th ult., Lambert went to his work as usual, but feeling very unwell he called during the morning at the Stockport Infirmary, and inquired when it was he was sent to the Pasteur Institute. He was furnished with the date and went home. As he felt much worse Dr. Bellamy was sent for. That gentleman's *locum tenens*, a young medical man, at once attended, and called in also Dr. Concannon. The two doctors saw the patient again at 10.30 on Friday night. Dr. Concannon, who has had previous experience of the disease, pronounced the case one of hydrophobia, and both medical men arranged to stay with the patient through the night. Death took place at 2.30 on Saturday morning. During the night the patient's condition was most distressing, and there was every indication of hydrophobia, which has been officially registered as the cause of death. The dog that bit Lambert came to Stockport from Withington, where it bit a policeman, who was also treated at the Pasteur Institute. It is stated that the police officer has since died from hydrophobia. On Lambert's return to Stockport from Paris he stated to a newspaper reporter that in all he underwent some twenty inoculations.

"A HUMAN VIVISECTION."

The Editor of the *British Medical Journal* exhibited himself in a fine frenzy in his issue of June 28th, because Miss Kenealy had published in *The Ludgate* monthly an article with the above heading. The said Editor is so apt to act the autocrat with members of his profession who display independence of judgment, that this exhibition of his *penchant* is not surprising. We quote the article entire:—

"In writing the short story entitled 'A Human Vivisection,' which appears in the May number of *The Ludgate*, Miss Arabella Kenealy's aim would seem to have been that of the fat boy when he told the old lady in the arbour that he was going to make her flesh creep. The tale is 'bluggy' enough in a conscience, but if it makes the intelligent reader shiver, it is not with horror but with disgust that a person who ought to know better should have written such trash. We have a 'Professor' announcing to his class, 'We shall this evening carry our scientific investigations to their logical conclusion.' What that 'logical conclusion' is may be gathered from the following passage of the learned man's discourse:—

"Gentlemen, in the course of our researches we do not hesitate to reduce to its constituent elements any other chemical or physiological compound. Shall we then hesitate because a particular compound chances to be more organically complex, for that reason more scientifically interesting? We merely free elements which sooner or later will be freed without our agency; and as 'sooner or later' are terms of no scientific significance, they are terms we are at liberty to disregard. Admitted that it is lawful—gentlemen, I am now arguing from the standpoint of vulgar prejudice—admitted that because man is a higher animal therefore a lower one may properly be sacrificed to instruct, to amuse him, or to alleviate his

pain, we come logically to the axiom that because one man is less educated, less useful, less physically perfect, or in some other way inferior to his fellows, he may properly be sacrificed for the instruction, amusement, or benefit of those fellows."

"The 'Professor' then proceeds to vivisection a poor drunken creature for the edification of the class, who, however, fly from him one by one as the Thanes did from Macbeth. Miss Kenealy evidently knows how to adapt the literary fare she provides to the intellectual digestion of the people for whom it is intended, for she makes her 'Professor' as stupid as he is criminal, experimenting with no definite purpose beyond that of a child who pulls a toy to pieces. Miss Kenealy's name appears in the *Medical Register* as a Licentiate of the Royal College of Physicians of Ireland; does she seriously believe that medical professors commit murder out of mere curiosity? If she does, she would do well publicly to dissociate herself from the professional fellowship of such monsters. If she does not, we can only say that her pen would be better employed even in writing novels of doubtful flavour than in slandering her brethren. Her story would be infamous if it were not silly. Miss Kenealy should leave that kind of thing to Ouida, who at least has the excuse of what theologians call 'invincible ignorance.'"

The worst kind of ignorance is that of those who do not desire to be enlightened, and the Editor of the *Journal* is an instance of its invincibility.

THE PARIS EXHIBITION OF 1900 AND A PRELIMINARY ANTI-VIVISECTION EXHIBITION.

WE have already published in the *Zoophilist* a suggestion that in addition to preparing an Anti-vivisection Exhibit for the Paris Exhibition of 1900, there should be earlier organized an Exhibition of objects connected with Vivisection, such as models of vivisected animals, vivisecting troughs, tools, and instruments, to be moved from place to place, for the instruction and education of the public as to what Vivisection really means and involves.

As we announced, the Committee of the Society approved the proposal, and, provided the funds be forthcoming, are prepared to undertake to see it carried out. It is anticipated that a considerable sum of money will be required for each of the objects, but most for the movable Exhibition. A subscription list has now been opened, and the following amounts have been already promised:—

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Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 4.]

LONDON, AUGUST 1, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Petwress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

MISS FRANCES POWER COBBE had a long letter in the *Echo* (London), on the 7th of July, in exposure of Dr. Chauveau's dreadful experiments on the excitability of the spinal marrow.

A MEMORIAL, discrediting the Pasteurian inoculation test for rabies, was recently presented to Mr. Long, at the Board of Agriculture, by the National Canine Defence League.

MR. LAWSON TAIT writes in this month's *Animals' Friend* on "Why I oppose Vivisection," and Dr Alex. Bowie gives an appreciation of the great surgeon's abilities, qualities, and work.

IN the House of Commons, on June 24th, Mr. Swift MacNeill presented a petition from members of the Anti-Vivisection League, in meeting assembled at No. 32, Leicester Square, London, on the 6th June, 1896, L. Shaw, chairman, praying for the total prohibition of vivisection.

THE very important Congress of Societies for Protection of Animals, held at Buda Pesth, on the 19th, 20th, 21st and 22nd of July, resulted in a splendid victory for the Anti-vivisection cause. It had been feared that the numerous "muzzled" societies on the Continent (*i.e.* societies controlled by vivisectionists, or supporters of vivisection) would carry a resolution practically rescinding the vote of the late Congress of Berne, whereby opposition to vivisection was recognized as part of the proper work of all such associations. Our friends, however, rallied nobly, and the result has been a vote of 176 Delegates in favour of labouring henceforth for the total prohibition of vivisection; as against 17 on the opposite side. The number of Delegates at this Congress was 200, and as each was empowered to represent five Societies and many of them actually presented as many credentials, we may assume the 176 Anti-vivisection votes to have represented the general views of at least five or six hundred Zoophilist Associations scattered over Europe and America. It is impossible to over-estimate the importance of this vast accession of strength and influence to our cause. It is scarcely too much to say that, had all the Societies for Prevention of Cruelty to Animals adopted our principles twenty years ago, our battle would have long since been won.

GREAT enthusiasm was exhibited by our Continental allies at the Congress. A correspondent writes, "Dr. B. and I are both amazed at the strength and steadfastness of our friends on the Continent. I can tell you that England is not the only country where there are strong, steadfast, Anti-vivisectionists." The speeches are said to have been specially good. Those of Dr. Förster (member of the Reichstag) and of Monsignor Reichzanger, were remarkable. *New England Anti-vivisection Society* and four other ably eloquent. Mr. Peabody (as representing his own American Societies) made a short and striking address on the subject of Vivisection in America; and Dr. Berdoe's eloquent speech (now published in separate form) will, we hope, soon be in the hands of our members.

WE observed with much pleasure that at the annual meeting of the Royal Society for the Prevention of Cruelty to Animals, the Chairman of Committee, Sir G. Measom, made a bold pronouncement against vivisection, this being the first occasion when anything like so strong a declaration of policy in the right direction has been forthcoming from that particular chair. According to the report in the *Morning Post*, Sir George used these words:—

"I wish to call attention to the abominations of

vivisection, which, in my opinion, have become so intolerable as to show that the law is defective in its present state."

We welcome a new ally, and trust this outspoken utterance may be followed by acts to correspond with it.

FROM a report of the Scientific Grants Committee of the British Medical Association, published in the *Medical Journal* of July 18th, it appears that £400 was granted in 1895-96 for scientific research. Much of this research involved experiments on living animals. Of the £400, £107 19s. 10d. was returned as unused, a fact which gives some colour to the allegation that a proportion of licensed vivisectionists abstain from vivisection. Beyond the £400 mentioned, £450 was paid out to three research scholars. We shall refer to the experiments made in another issue.

ON July 7th the death was reported of a little boy named Arthur Skiller, at the London Hospital, of tetanus or lockjaw. He had been injected with tetano-toxin, costing about £5, the house-surgeon said. The jury who inquired into the case returned a verdict of "Accidental death." Was it?

WE have lately had the opportunity of perusing an American pamphlet, in which eleven of the most highly-placed American physicians and surgeons broadly state that after much inquiry, study, and experience they do not believe in the existence of such a disease as hydrophobia. That the malady, if it exist at all, is much rarer than is supposed, was also borne witness to at an inquest in London, on the 7th of July, into a case of alleged hydrophobia. Dr. J. Rose Bradford, a vivisectionist, and now Professor Superintendent of the Brown Institution, said "the symptoms in hydrophobia and mania were much the same. He did not think the case under inquiry was a case of hydrophobia."

THE *British Medical Journal* (July 4) gives an account of some experiments with intra-venous injections of salt water under various conditions of poisoning. Here is a sample of them:—

"Delbet was not able to detect the alkaloid in the urine or saliva of dogs poisoned by strychnine, and in one case only of 8 was the effect of the poison modified by the injections. A dog, 4.3 kilos, received 3 milligrammes of sulphate of strychnine; then, in 85 minutes, 0.91 g. of the saline solution, when all symptoms had ceased and the animal recovered. In 105 minutes from the beginning of the injection it made the enormous quantity of 532 g. of urine. It was killed some days later by the same dose of the poison in twenty-one minutes. Further experiments had proved that the injection of even large quantities of the saline solution did not [kill?] when the arterial pressure was normal, nor even when it was artificially raised by atropine."

Poisoning by strychnine is one of the most painful of all forms of poisoning, and for a dog to be put through all the agonies of it twice over betrays a degree of callousness on the part of the experimenter that cannot well be exceeded.

WE are glad to see that the *British Medical Journal* (July 4) has joined in the protest of all true Zoophilists against the cruelty of wearing aigrettes. But why does our contemporary spoil its righteous protest by an

endeavour to atone by this Zoophilist outburst for its own pet form of cruelty?—"More suffering is produced to supply the bonnets for one garden party than in all the physiological laboratories of the world." Suppose this outrageous assertion were true—and would that we could believe it!—two blacks don't make a white, and the *Journal's* protest against the one form of cruelty is very much discounted by the absence of protest against the other. We confess we have much greater hope of an improvement in the morals of fashion from the womanly practical resolve of the Princess Maud to give no countenance to the wearing of aigrettes at her wedding, than from the lop-sided sentiment of the "*B. M. J.*"

THE branches of the British Medical Association have been holding their summer revels preparatory to the general annual meeting, which will take place before this number of our journal is published. A combined meeting of the East Anglian, Cambridge, and Huntingdon Branches at Dersingham was addressed by Dr. A. R. Manby, surgeon apothecary to the Prince and Princess of Wales at Sandringham, and his subject was "Some points at issue between the public and the profession" (*British Medical Journal*, July 11). Now this subject is one of growing importance; for as the public advances in intelligence it is less and less inclined to swallow medical *ipse dixit*s, as well as nauseous doses, without knowing a reason why. The greater part of Dr. Manby's address was concerned with the inadequacy of medical fees; though he had also a word of caution to impart on the desirability of secrecy, *à propos* of the Playfair case.

BUT Dr. Manby is as blind as the rest when he comes to deal with the real questions that are and must be at issue between the public and the profession so long as the latter obstinately puts what it believes to be professional interests before mercy, justice, and public rights. Dr. Manby looks forward to a golden age when the medical profession will reap "the reward of a self-satisfied conscience, which latter they will certainly enjoy when disease shall be rare, and only natural decay or accident shall end a vigorous and virtuous life, and when golden statues shall be raised in every market-place to Jenner and Lister, when every man shall be his own doctor, and the screeching army of anti-everything shall be by common consent doomed to the silence of perdition."

BEFORE leaving Dr. Manby we must give this delicious picture of what he thinks the profession have achieved—and what he thinks we have achieved:—

"Already we have stamped out smallpox, scarlatina is rare, typhus rarer, erysipelas, hospital gangrene seldom seen, myxœdema under control, surgical fever a thing of the past, hydrophobia and tetanus now not certainly fatal, cholera reduced (by boiling water) to impotence, rinderpest stamped out, glanders checked, antidotes found to most if not all poisons, pains of all kinds lessened, knowledge scattered gratuitously and broadcast, and all this in spite of the opposition, not only of the screechers and the illiterate, but of the educated classes, bishops and leaders of thought, and harder still of those poor ones for whose good we would and do work, and yet who so misunderstand us—thanks chiefly to the misrepresentations of perverse people nourished by societies started and maintained by themselves and their fellow idlers, chiefly for themselves, to whom it is easier to beg than to work, and to propagate and distribute that which, being half a truth, is ever the worst of lies, rather than to investigate, seek for, and acknowledge the self-denying and

far-reaching charity which underlies the apparent cruelties of all science."

The charity may be "far-reaching," but we confess we prefer that which "begins at home."

ANTI-VIVISECTIONISTS who demand total prohibition are often met with the query, "But surely you would not shut the door against the testing of a new drug on an animal?" *Cui bono?* The experimentalists are apparently giving up drugs. This is evidenced by the invention of the various anti-toxic animal substances now so popular with the bacteriological school. One of the latest and most disgusting inventions is that of Professor Landau, of Berlin, who has prescribed ovarian substance for women in certain cases. If there be left in the breast of the medical profession any regard for cleanliness or decency we are astonished they do not unanimously condemn such filthy procedures. Language is scarcely strong enough to fitly characterize the resort to such a treatment. We anti-vivisectionists are sometimes taunted with impeding the march of science, but if some of these experimenters are let alone, they will take back the art of medicine to the practices of the dark ages of their own free will.

THERE is a warning in the new number of the Royal Agricultural Society's Journal against the use of these animal extracts in regard to cattle and horses, wherein it is shown that the injection of them may prove not only dangerous but disastrous. The author of the article is Professor Brown, formerly veterinary adviser to the Agricultural Department. Writing of tuberculin, he says:—

"Tuberculin, a cultivation of the tubercle bacillus, has proved to be valuable for the detection of tuberculosis. . . . It has already been employed by owners of cattle to enable them to weed tuberculous animals out of their herds, and to send them to market. Such an abuse should be stopped if possible; of that there cannot be any question, for one effect of inoculating animals with tuberculin has been proved in some cases to be that of distributing the tubercle bacillus to parts of the body not previously affected."—*Standard*, July 6.

ANOTHER point Professor Brown makes is against the use of the virus of glanders, called "mallein." "In this connection," we again quote from the *Standard* of the 4th ulto., "it appears that some owners of horses are rendering themselves liable to heavy penalties, as well as to the seizure and slaughter of their animals, by subjecting them to the mallein test, and, if they react, sending them to market, or exposing them in some public place, or in a field or building adjoining a highway." Thus it appears that an inoculated animal is an infected one and dangerous to others around, or which may come into contact with it. The matter is so serious that Prof. Brown is of opinion that nothing short of an Act of Parliament prohibiting the use of tuberculin, except under special restrictions, will meet the difficulty.

THE value of the anti-toxin treatment of diphtheria may be gauged by the following extract from the *Lancet* of July 4th (p. 64):—

"The data for the four weeks ended June 13th do not afford any indication of a decline in the amount of diphtheria in London. The figures are higher than those for any like period since that which brought 1895 to a close. The total of notified cases in the period under review was 1060, yielding a weekly average of 265 cases, as compared with 222 in the

preceding period, ended May 16th. . . . The deaths registered in the June period totalled 196, against 161, and were, on the average, forty-nine weekly, as compared with forty in the preceding period. The per case mortality was 18.5 per cent., as compared with 18.1 per cent. Thus we see the disease once again manifesting a disposition to become increasingly epidemic both in its amount and its character."

Thus we see, also, the promise of a new panacea derived from vivisection discredited on experience. If the new nostrum were worth anything it ought to lower the death-rate from diphtheria in a given area, in fact, generally, wherever it was used. It is evident it fails to do so. Hence it must be accounted a delusion, not to say a fraud. Thus another "discovery" has exploded in the hands of those who brought it forth.

BUT not only does anti-toxin fail to lower the mortality from diphtheria: it positively augments the death-rate among those submitted to its use. Professor Peter said of Pasteur's nostrum, "It does not cure hydrophobia: it gives it." In the same way it might be said with truth of anti-toxin in regard to diphtheria, "It does not avert, but induces a fatal issue." These remarks are based on a statement reprinted in the *British Medical Journal* supplement of July 4th, which ran as follows, and which will speak for itself:—

Gottstein (*Therap. Monatshefte*, May, 1896) has been induced by Langerhans's case to collect the references to deaths under, and presumably from, the anti-toxin treatment in the literature. These fall under two headings, according to whether the patient was actually suffering from diphtheria, or whether it was inoculated as a preventive measure or when suffering from a throat affection which turned out eventually to be non-diphtheritic. In both these categories there are elements of difficulty. In the first it may be uncertain as to whether death resulted from the disease or the remedy; in the second the fatal issue may have been due to latent diphtheria or some other grave affection. It must also be remembered that many of the cases which recover develop complications due to the anti-toxin; out of 1,805 such recoveries (in 2,228 cases) recorded in Berlin during the first quarter of 1895, 420 showed exanthemata or other signs arising from the anti-toxin, a total of 23 per cent. Gottstein enumerates fourteen cases in which diphtheritic children appeared to have died from the effects of anti-toxin, and four in which diphtheria was excluded, but the child nevertheless succumbed. He comes to the conclusion that in a certain definite number of cases, not confined to patients suffering from diphtheria, the injection of anti-toxic serum has been rapidly followed by fatal collapse. He considers that in spite of the large number of cases which recover without any after-symptom, the fatal instances show diphtheria anti-toxin is a more or less dangerous remedy, often leading to the symptoms of poisoning by fibrin ferment. He considers also that the proportionate danger is greater than that with chloroform, since the latter is at any rate certain in its action, whereas the serum often fails altogether, while its immunising power is most variable."

"A MANUAL OF PHYSIOLOGY," by G. N. Stewart, M.D., etc., Examiner in Physiology of the University of Aberdeen, contains the following instructions for splitting the spinal cord of a dog:—

"Put a small dog under morphia [a stupefier only, not an anæsthetic] and fasten it on a holder in the prone condition. Clip and shave the skin over the three lower dorsal vertebræ. . . . Then, giving ether if necessary [the experimenter would find it very necessary if he were subject to such an awful operation], make a longitudinal incision under antiseptic precautions down to the spines of the vertebræ. Dissect the muscles away from the spines and vertebral laminæ; with bone forceps or strong scissors cut through the laminæ

on each side of one of the lower dorsal vertebræ, and remove the posterior portion of the arch with the spinous process. The spinal cord will now come into view, covered with the *dura mater*. Seize the *dura* with fine pointed forceps and divide it freely in the mesial line. Then with a narrow bladed, sharp knife (a cataract knife, *e.g.*) divide one-half of the cord. If there is not room enough to work satisfactorily in the spinal canal, remove another vertebral arch. Sponge the wound with iodoform gauze wrung out of normal saline solution, previously boiled and still as hot as the hand can bear; then put in a row of deep sutures, bring the skin together by stitches and paint the surface with collodium."

THEN the author of these revolting details proceeds:—

"Place the dog in its cage, and study the loss of motion and sensation in the two hind legs during the stage of shock (first few days) and then later on, when a certain degree of recovery has taken place. Test the sensibility for pain by pinching the legs or toes; for temperature by placing them in hot or cold water. After five or six weeks, or a longer or shorter time, whether the symptoms are stationary or not, kill the animal by chloroform."

This is the sort of thing which vivisectors describe in their arguments *coram non judice* as "scratching a rabbit's back."

HERE is Dr. Stewart's method of treating a rabbit:—

"In experiments in stimulating the depressor nerve in a rabbit, anæsthetise a rabbit with half a gramme of chloral hydrate, and if necessary with ether. For blood-pressure experiments only small doses of chloral hydrate or chloroform can be given, as they affect the vaso-motor centre."

That is to say, the anæsthesia is a mere pretence, as, if enough of the drugs were given to ensure freedom from suffering, it would spoil the experiment.

DR. J. BERRY HAYCRAFT and Dr. D. R. Patterson contribute a paper to the *Journal of Physiology* (Vol. xix., p. 496) on the "Shape of the Heart," in which we find the following:—

"In the dog with an opened chest we can learn by inspection that the heart decreases in all dimensions during systole, provided we are careful to inflate the lungs so as to buoy up the heart into its natural position."

The experimenters thrust needles into the left side of the chest of a rabbit and attached "light straws" to the heads of the needles projecting outside the chest, so as to enable them to study the position of the heart "during the cardiac cycle."

In a paper emanating from the Physiological Laboratory of University College, London, by E. A. Schäfer, F.R.S., and B. Moore on "Contractility of the Spleen," published in the *Journal of Physiology* (Vol. xx., p. 1), the experimenters say that "the rhythmic contractions are greatly diminished or entirely abolished by chloroform," but we learn that "they continue freely in a curarized animal." There are many inducements for the vivisector to use curare in place of a true anæsthetic.

THEY do not find the results of their experiments agree with those of Professor Roy. They say "the instrument devised by Roy was unsatisfactory to work with"—they have invented a better "spleen-box." They intimate that they "cannot believe that the difference between our result and that obtained by Roy is to be accounted for by supposing it to be due to the employment of" [a

dose of atropin]. Such are the difficulties and sources of error inseparable from experiments of this character.

IN a paper on "The Formation of Lymph," by Dr. W. S. Lazarus Barlow, Demonstrator of Pathology in the University of Cambridge, published in the *Journal of Physiology* (Vol. xix., pp. 419-20), the writer says:—

"It is now well recognized that opening of the abdominal cavity alone produces marked modifications of the specific gravity of the blood and of the tissues, and therefore the severe procedure necessary to obtain the portal pressure was considered to introduce sources of error more than counterbalancing any advantage that might accrue from its estimation. For the same reason throughout the whole investigation the kidneys were not interfered with; apart from the actual effects produced by the operation, removal of these organs, which are essentially the regulating mechanism for the composition of the blood, from the circulation, introduces so much general disturbance of the animal economy, that it was thought better to leave them untouched."

WHAT a light this throws on the whole business of animal experimentation! Every step the vivisector takes he spreads error and introduces confusion into the study of physiology. "Marked modification," "sources of error," "general disturbance of the animal economy"—these are the effects of his handiwork; and these are some of the reasons which convince us that animal experimentation can never be truly scientific. The writer says, with reference to a certain injection of salt into the veins of a dog:—

"It is obviously only fair to compare the effects of the first injection in an experiment, since it is possible that the effects of this may not have completely passed off before a second injection is given, though in the actual experiments care has been taken to avoid this source of error as far as possible. Nevertheless—" (p. 433).

There is a world of meaning in that "nevertheless!"

THERE is a very suggestive, not to say alarming, paper by Dr. J. C. Dunlop, of the Laboratory of the Royal College of Physicians of Edinburgh, in the *Journal of Physiology* (Vol. xx., p. 82) on "The Action of Large Doses of Dilute Mineral Acids on Metabolism." The writer says that recently when investigating the excretion of oxalic acid on patients in the Royal Infirmary and Chalmers's Hospital, he performed experiments on three men by giving very large doses of dilute hydrochloric and sulphuric acid.

IN "experiment I." dilute hydrochloric acid, British Pharmacopœia, was administered to the extent of 60 minims a quarter of an hour, and repeated three-quarters of an hour after the three principal meals; in all, 360 minims per diem. In experiment II. we are informed that the patient's digestion was healthy, the treatment of the disease with which he was suffering "was suspended for several days prior to the commencement of the experiment." In experiment III. the subject's digestion was considered healthy, and he was given 360 minims of dilute sulphuric acid daily. Now the *Journal of Physiology* is concerned, not with clinical treatment, but with scientific experiment, and the tables showing the analysis of the excretions and other details prove that these patients were being experimented upon for chemical and physiological reasons. The maximum dose of the acids employed is given in the British Pharmacopœia as 30 minims, this dose being usually administered three or four times a day.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

DEPUTATION TO THE HOME SECRETARY.

On Friday, the 27th July, a deputation waited upon Sir Matthew White Ridley, Secretary of State for the Home Department, at the House of Commons, to urge that the new building on the Chelsea Embankment, now approaching completion, to be known as the British Institute of Preventive Medicine, should not be registered as a place at which experiments upon living animals might be performed. The deputation was introduced by Colonel Lockwood, M.P., and consisted of Sir Robert T. Reid (late Attorney-General), Rt. Hon. A. J. Mundella, M.P., Mr. Justin McCarthy, M.P., Mr. Samuel Smith, M.P., Surgeon-General Thornton, C.B., and Mr. Benjamin Bryan, Secretary of the Victoria Street and International Society.

Colonel Lockwood, in introducing the deputation, said: Sir Matthew, I beg to be allowed to introduce to you a deputation from the Victoria Street Anti-vivisection Society, and representing on this occasion the whole of the Anti-vivisection Societies of London. We purpose to put before you, as shortly as possible, our reasons for requesting you not to sanction the licensing or registration under the Act of the new Institute of Preventive Medicine, the building for which, we understand, is almost completed. Since 1889 we have agitated without ceasing on this point. We do so for two reasons—first, for the reason that we object to vivisection entirely; and in the second place, because we believe that there are already sufficient facilities for the practice of this objectionable branch of the science; and further, we say that there is plenty of useful work to be done by this Institution of Preventive Medicine in other ways than by the practice of licensed vivisection.

Mr. SAMUEL SMITH, M.P.: I think I do not need to add very much to what Colonel Lockwood has said. We represent, as you know, Sir Matthew, a great body of opinion in the country which is very much opposed to the cruelties perpetrated upon dumb animals in connection with the process of vivisection. At present it is conducted in a good many places in England, under legal supervision, but if this large Institution were to be licensed on the basis of a Pasteur Institute, which we understand is the object of the promoters, there would be an immense extension given to this excessively cruel and degrading practice. As you no doubt are quite aware, the Pasteur Institute torments to death every year many hundreds of dogs, cats, and other highly-organized animals, horses also being used. It is not a case of low organized animals, like frogs or rabbits, but very highly-organized animals. They are subjected, as every one knows who has paid any attention to the matter, to the severest torture. We are very anxious to prevent the spread of these loathsome practices in England. We believe they demoralize the people who engage in them, and the public who know of them, and that altogether vivisection is a most degrading thing. Now, we have already quite sufficient of this going on, without the immense extension that would be given to it by the licensing of this new building in London, and we therefore hope that you will see your way to refuse to register this place for the purpose of these experiments. As Colonel Lockwood has said, there are plenty of other valuable directions in which this place could be employed, without this loathsome and detestable practice being introduced, with very considerable danger to the health of the public, because it is impossible to carry on these experiments without certain risks, and considerable risks. For instance, Pasteur has hundreds of dogs that are made mad and kept in a state of furious madness to death, and a number of vessels, or tubes, are used in his researches containing the most poisonous materials; and if a single particle of this gets into the human system it produces the most dreadful disease. I am told that a heap of these broken tubes was discovered at the Pasteur Institute at Paris, lying in the open air on a heap of rubbish, with flies buzzing about, so that of course the infection might be carried elsewhere. That is really the risk to which we are exposed by concentrating these fearful diseases in the way adopted at these Institutions—concentrating them in the most highly poisonous form, so that a single fly that touches

this putrid matter might be sufficient to cause the death of any person it alights upon. These, sir, are just some of the incidental risks that we think would result from bringing this thing into the heart of London, and we hope you will see your way to steadfastly refuse to give any sanction to it.

Sir R. T. REID: Sir Matthew, into the general consideration of the whole principle and practice of experiments upon living animals, I do not of course want to enter at all now; the subject is a familiar subject to everybody, and I do not want to enter upon it—avowing myself to be most strongly opposed to these experiments altogether. But that is not the only matter. What arises here is this. The principle of the Act which governs these matters is, undoubtedly, to limit these so-called experimental researches so that there shall not be an unnecessary number. The object was a humane object—while allowing the possibility that experiments on animals might be required in the interests or the supposed interests of science, at the same time ensuring that they should be strictly limited. Now, Sir Matthew, I am sure you will not think that I mean the smallest reflection upon the Home Office or anybody connected with it; I really mean nothing of the sort; but I am not quite sure that there has been machinery supplied to the Home Office, in accordance with the principles of the Act, by which the Home Secretary is enabled to judge whether there are sufficient existing licenses for all practical or reasonable purposes. I believe that there has been of late years a very considerable increase in these licenses, and I am not aware that there has been any correspondingly increased necessity. I am, as I said before, not in the slightest desiring to make any reflection upon anybody at all in the matter. But here comes a proposed new Institute, and, if it is to be carried on in the way in which similar institutions are supposed to be carried on, and believed to be carried on in Paris, it will be a frightful addition to the system already existing, and will give a sort of countenance, almost, to wholesale experiments, without any due limitations at all. May I point out one thing further; I do not want to dwell unduly upon this matter. I would suggest to you whether you could not in any event consider this; that there should be accessible information of a reliable kind in regard to what does actually take place under any license that you may grant. It is a misfortune that there is really now under these licenses little—in fact nothing—except the account given by the licensed person himself of what takes place, which practically amounts to no safeguard, whereas it is obvious that the principle of the Act was to require and provide a safeguard. In the event of your taking a different view from that urged upon you by the deputation, although I most heartily hope that you will take that view, I trust you will consider whether some sort of safeguard cannot be provided in the direction I have mentioned.

Mr. JUSTIN MCCARTHY, M.P.: I have only just a very few words to add. One thing that I may say is of a very practical nature; that, within my certain knowledge, a friend of mine, a perfectly hale man, in the vigour of life and health, was poisoned from one of those refuse heaps that Mr. Samuel Smith referred to, and died from it.

The HOME SECRETARY: That was in Paris.

Mr. JUSTIN MCCARTHY: In the neighbourhood of Paris.

The HOME SECRETARY: I mean, not in England.

Mr. JUSTIN MCCARTHY: No, not here. I may say for myself, I am inclined to go so far as to say this; that, if the extension of this system were to bring some problematical benefit to the world, I should rather be without that benefit than go very much farther in extending this practice. After all, life is an important thing, but there are some things we must not do even for the sake of preserving life. I do not myself believe that life will be preserved at all by indiscriminate extension of the system; but, supposing it were to be, I would rather, for one, that we should take our chance, and not let the thing go any further than the license and permission now provided for.

Col. LOCKWOOD: Perhaps, sir, you will allow the Secretary of the Victoria Street Society, Mr. Benjamin Bryan, to give you a figure or two.

Mr. BENJAMIN BRYAN: I was also going to refer for one moment, if you will allow me, Sir Matthew, to the point raised by Sir Robert Reid that this Act was undoubtedly passed by Parliament with the design of protecting the animals, but under the system as it is at present carried on, it protects the

vivisector, and enables him to preserve secrecy, because he only reveals what he likes. The Inspector makes his visits at long intervals in the course of the year—not more than, on the average, once per quarter. In the intervening periods the animal has no friend in Court, and is at the mercy of the vivisector. That my Society and the friends of this cause conceive to be an objection to this Act. But the strong point we make against this Institute is that there are already in London eighteen registered places, at eleven different institutions. In 1894, the last year for which we have the official Return, there were 76 men already at work in those places, making experiments on animals. I find, on taking out the figures, that the total number of experiments for the year 1894 was 3,104 for England and Scotland, and that of those 2,183 were done in London—two-thirds of the whole were done in the Metropolis itself. Therefore we urge, that being so, the necessity for further facilities for experimentation is non-existent. This building, the Institute of Preventive Medicine, is now progressing very far towards completion; it is almost ready for the roof to be put on. I may say we have protested against it at intervals from the time of its being first projected. Before its building had been commenced we sent a memorial to your predecessor, Mr. Matthews (which will be still in the Home Office), against it; and therefore I hope it may not be said that we are too late with our objection, because the building is up. I may also say that with regard to the bacteriological experiments for which this Institute is designed, if any, the Government already promotes such experiments at the public expense, as shown by the recent report of the Local Government Board, and therefore we submit that in a public sense all is done that is necessary, supposing the public interest from any point of view to require or demand it. The Local Government Board have lately issued a Report which shows that Dr. Klein, at the public expense, made in the year 1894-5 a large number of experiments of different kinds involving the injection of the viruses of various diseases into animals, setting up fever and pain and suffering. Then, sir, if it be said that supposing you do not register this place as a place for experiments to be performed it will therefore be useless, I beg to point out to you that in the prospectus as put forward by the promoters, they say: "One of the objects is the chemical and bacteriological examination of water supply, and the investigation of processes of sewage purification"; also it is "for the bacteriological and chemical examination of any samples of water which may be submitted"; and "to give expert assistance in the bacteriological or pathological diagnosis of any pathological material." The first two definitions of objects we consider quite harmless; we have no objection to scientific investigation as such, but we do object to this further object which is set down as "to give expert assistance in the bacteriological or pathological diagnosis of any pathological material," which means, no doubt, the injection of diseased material into animals for the setting up of disease, in order to observe pathological processes. We ask you, if you are applied to to register this building as a place for the purpose of experiments, to hold your hand and to say that these other scientific objects are legitimate and may be required, but that with regard to further experimentation in London there is already sufficient provision, and that further facilities are not required. There is Surgeon-General Thornton here, sir, if you would like to hear a medical opinion; he quite agrees, from a medical point of view, about the uselessness of these experiments.

The HOME SECRETARY: That is another question; we can hardly go into that, because I understand, gentlemen, although you are opposed to vivisection altogether, and think it unnecessary, still you do not come to urge that upon me to-day. You come to urge upon me that the Act ought to be administered with great caution, and that facilities for these experiments in London should not be extended. Well, I shall not give you my own private view upon vivisection, because I do not think that it is my duty to do so. My duty is to administer what Parliament has determined to be the law; and I do not hesitate to express my conviction that this is a matter which ought to be most closely watched, and that (as I believe is the practice now with the Home Office) the greatest possible care should be taken, not only in granting licenses and in registering, but in watching the results, and seeing as far as we can that there shall be no abuse. I can assure you that I in no

way differ from the opinions expressed by my predecessor, Sir Michael Hicks-Beach. You will remember that he received a deputation from the other side with reference to this building; and the Articles of Association were then altered in such a way that the Government of the day or the Home Office of the day should not be committed to expressing its opinion in favour of licensing any individuals or registering this place as a place at which experiments should be carried on upon living animals. Therefore the path of the Government is, I am thankful to say, clear. Subsequently you approached Mr. Asquith on this subject. I have hardly had time to read what he said, but I think he expressed, what I should wish to express, the desire to take the utmost caution in granting licenses or registrations if he was asked for them. At this present moment, gentlemen, I have not been asked to register this place in any way. I have had no approach made to me upon the subject, and I am not aware what the intentions of the company or the promoters of this building are with reference to the particular point upon which you come to me. I imagine from what I know of their proceedings and their intentions that there is plenty of scientific work and experiment before them, quite apart from the question of experiments upon living animals. Therefore, gentlemen, upon the whole principle I express no opinion, but I certainly do think that it is a thing that ought to be, as is entirely in accordance with my own feelings, most carefully guarded and protected in every possible way. With regard to the machinery, about which Sir Robert Reid spoke, I know it is said sometimes that the inspectors who are at the command of the Home Office are not quite adequate in number for seeing that when licenses are given, as limited in number as they are, they are properly carried out. All I can say is, if I am persuaded that that is the case, I should be most anxious to have more assistants; but, at the same time, I have been most careful in inquiring from the inspectors how they conduct their visits. They are surprise visits—nearly all surprise visits—and I get a great deal of information as to the results and the carrying on of these experiments which is not made public, in order to satisfy me as having a very responsible position in the matter, that there is no abuse; and I really do believe that, granting that you are to have experiments of this kind at all—which is sanctioned by Parliament—they are most carefully watched and guarded now, and that there is not that amount of abuse which in some quarters it is thought there is. I am convinced of that, at all events; and I can assure you, gentlemen, that the object and intention of the Home Office is to see that these powers are only given where they are likely to be of proved advantage to humanity, that being the intention of the Act of Parliament. With reference to accessible information of a reliable kind, of which Sir Robert Reid spoke, it is at least questionable whether to put into Reports to Parliament the details of these things does anything but harm. At all events, I do not think that the reports of Dr. Klein's proceedings, which appeared, I am told, in some report which has been alluded to, did any benefit to the community or to the public. I have at the present time (I think I might almost say that it is in this room now) a report before me with reference to the nature of the inspection, and with reference to how far I may require further reports as to actual results, in order that I may know, not only whether those results have satisfied the expectations and intentions of their promoters, but whether they are such results that it is desirable to license any more experiments of the same kind. That, it appears to me, is a very good check upon the demand for these experiments. Gentlemen, I can only say that I agree entirely with the observations that were made by my predecessor when he was approached upon the same subject, namely, that, in considering this question I have not only to consider the protection of the animals, but I have also to consider the question of possible dangers to health which have been alluded to, and it will require a great deal to convince me that it is desirable to register or grant a license for vivisection to any new Institution which is erected in London. It is not my duty to take the part of an anti-vivisectionist; it is my duty to hold the balance, as fairly as I can, between legitimate scientific demands on the one hand, and the views of those who resent strongly, as most of us do, any cruelty to animals. I have had no application made to me at the present moment. I am not aware that any application is coming.

Mr. BRYAN: The building is not quite finished.

The HOME SECRETARY: At all events, gentlemen, the effect of your coming here to-day is certainly in the main in accordance entirely with my own views, and it only strengthens my hands. I shall certainly, during the time I have any power, grant no licenses to conduct experiments the probable necessity of which does not appear to me to be adequately proved.

Mr. MUNDELLA: Will you, sir, allow me to express the hope—because I was a party to the passing of the Act twenty years ago, when Lord Cross was Home Secretary—that the strictest *surveillance* will be maintained over all those who practise vivisection.

The HOME SECRETARY: As far as I know it is really done now. I have seen Dr. Poore and others, and I have cross-examined them with reference especially to an unfortunate report which crept into the *London Daily Chronicle*, which altogether arose out of a misapprehension of the facts. There was no truth in it, as the editor was good enough to allow when he made inquiries, but in consequence of that I saw Dr. Poore, and I have had a memorandum prepared on the subject. I can assure you I am quite alive to the necessity for adequate inspection, and, within the limits of the Act, I am anxious that any move that is made shall be in the right direction.

Colonel Lockwood briefly thanked the Home Secretary for receiving the deputation, and the members then withdrew.

DR. BERDOE AT BUDA-PESTH.

Having been favoured with a copy of Dr. Berdoe's address, delivered at the great Congress of Societies for the Prevention of Cruelty to Animals, held July 18-21 last, we make the following extracts:—

CRUELTY SYSTEMATICALLY TAUGHT.

We Anti-vivisectionists are often reproached for impeding men of science in their researches, while not interesting ourselves in preventing the cruelties of sport, farm-yard cruelties, and those connected with the preparation of food. But the fact is that the friends of animals do interest themselves in all these things, although as Anti-vivisectionists they are more scandalized, inasmuch as no other form of cruelty is systematically taught to our sons and daughters, and actually held up to the world's admiration obscured in all the adornment of scientific terminology. Cruelty is not less cruel because it is called physiology or bacteriology. It is the more cruel because it is systematic, prolonged, and assisted in a hundred ways inaccessible to butchers, farm servants, and sportsmen. No ignorant person can do a thousandth part of the awful things daily practised in the laboratories of Europe and America. To pretend therefore to protect animals, and at the same time licence the vivisector, is to make a mockery of the whole business. An opportunist code of morals is hateful to persons of high principle and sound common sense. Either give up mercy to animals altogether or abandon your attempt to accommodate your mercy to the fashion of the hour. Let us be consistent; let us not be all eyes to the cruelties of the street, and blind and deaf to those of the laboratory. Otherwise we shall earn the contempt of the masses, who will say we only punish cruelty when it is vulgar. I can understand people who say they are indifferent to the sufferings of brutes and refuse to interest themselves in the suppression of cruelty towards them. What I fail to understand is that those whose minds have been opened to our appeals, whose hearts have gone out to our dumb friends, should submit to be so fascinated by appeals made in the name of science that they refuse to touch the vivisector, as if he were the Lord's Anointed.

ARE ANIMAL-LOVERS BEWITCHED?

Who has bewitched the animal lovers—the members of societies for the prevention of cruelty towards the beasts that are so moved away from their own gospel of mercy to the weak that at the demand of a doctor they stand paralyzed when he takes their very domestic pets and crucifies, flays, and racks them while they are consenting parties to the sin? Does he say he cannot save the health or life of yourselves and those who are dear to you without this sacrifice? It is false.

The healing art has never been advanced by any such means, nor, in my opinion and in that of hundreds of medical men, many of them of far greater authority, can it ever be. . . . Many appeals have been made to English Societies for the Prevention of Cruelty to Animals to induce them to take action against Vivisection, but without much success. Mr. Colam can, perhaps, tell us why. Probably the truth is that it is felt to be too painful to class eminent scientists with vulgar ill-users of animals, and doubtless a large number of subscribers think the vivisection question a doctor's question and relegate it accordingly to the medical societies. Doctors naturally resent outside interference with matters they hold to concern themselves alone, and as many of them are influential supporters of Societies for the Prevention of Cruelty to Animals, it is held to be unwise to alienate their support. And so it happens that the animals are condemned to torture in the very house of their friends. A strange anomaly indeed,

THERE MUST BE RESTRAINT.

Nations everywhere have had, again and again, to restrain the powers of the clergy; not even in the interests of Christianity can men be safely entrusted with too much power, and it is no reflection on the great and noble profession of medicine that it should be as necessary to protect it from the danger of over-professionalism as it has been found necessary to protect other bodies of learned men from similar exaggerated ideas of their power and privileges.

A GREAT PRINCIPLE OF MORALS.

There is much more involved in this burning question of anti-vivisection than appears at first sight. It is no merely selfish infatuation for our pet dogs and cats that has brought us from far distant lands to meet in this congress of humanitarians. A great principle of morals is involved. The man who is cruel to a brute beast is only restrained by fear of the law from treating cruelly his fellow man; by consenting to his cruelty to the animal we help him to throw back the moral progress of the world, to retard the march of mercy and justice and to degrade his own higher nature. *Noblesse oblige*, and a scientific education demands that the man of science should help and not impede ethical advance. There is nothing that vivisection can at the highest estimate do for our physical health to be compared with the injury its tolerance must do to our moral nature. This Congress is an œcumenical council of the friends of humanity. "Humanity is one, and not till Lazarus is cured of his sores will Dives be safe." Not till justice is done to the animal world will justice be done to the weaker and defenceless of our own species; the hands that are busy to-day in torturing animals in the name of science will not be restrained to-morrow from exploiting the misfortunes and sufferings of the ignorant, the afflicted, and the weak of our own flesh and blood. Do not flatter yourselves, dear friends, by thinking that when you have restrained a cruel driver from flogging his horse or a school-boy from tormenting a cat you have done your whole duty to the animals. Ten thousand animals to-day in the laboratories of the Western World are having their skulls bored, their brains scooped out or burned, their hearts exposed, their nerves laid bare, and stimulated with electricity; their blood poisoned with cruel and lingering diseases and every imaginable mutilation and diabolical invention to cause suffering inflicted upon them, such as the crucifying torment of Mantegazza, or the bone crushing blows of Castex; and all this whilst tender-hearted men and women, members of wealthy societies for prevention of cruelty, societies under Royal and Imperial patronage, decline to extend their mercy to these victims of a coward science because their tormentors are educated men. "Vivisection is the blackest crime that the law of any land ever let go unpunished," says good Dr. Elliott Preston. To refuse to help to suppress it when the facts are as easily attainable as they are in this case is to be a partaker in the iniquity of the torturer, and to forfeit the right to address the God of Eternal Justice as "Our Father." If by consenting to the cruelties of vivisection we could at once blot out all the poverty, sin, suffering, and sorrow of the world, we dare not consent to them, for we dare not do evil that good may come. How much less then shall we consent to perpetuate vivisection when it cannot be shown ever to have abolished a single disease or established one firm principle of medicine!

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, SATURDAY, AUGUST 1st, 1896.

MORE OF DR. KLEIN'S EXPERIMENTS.

"WHAT will the anti-vivisectionists think of Dr. KLEIN?" asked the *Daily News* of July 17th. We should have thought that after all that transpired before the Royal Commission of eleven years ago most people would have known that the anti-vivisectionists think very meanly of Dr. KLEIN, as the man who said that in experimenting on animals he had "no regard at all" for their sufferings. The anti-vivisectionists further think that, considering the reputation he made for himself at the period referred to, it is an absolute scandal that such a man should have been for years, if not an officer of the Government of Great Britain, certainly a recipient of its money. Dr. KLEIN is still a servant of the public, and carries on experimental researches under the auspices of the Local Government Board. It was *à propos* of his doings in this capacity that the remark with which we commenced this article was made. That remark was founded on Dr. KLEIN's own report of some researches into the etiology of typhoid fever, contained in the recently issued *Report of the Medical Officer to the Local Government Board for 1894-95*.

From this report it appears that Dr. KLEIN performed a series of experiments, which commenced by his making a guinea-pig ill seven times in three months with the typhoid bacillus; then killing it, he made serum and bacillus experiments on two more guinea-pigs. They died. A fourth, fifth, and sixth guinea-pig were made very ill and died; two were made ill, but recovered. The experiment being repeated to see if "the result was uniform," a seventh and eighth guinea-pig were found dead next morning, two others surviving; a ninth, tenth, eleventh, and twelfth guinea-pig suffered "illness in the evening and death before morning," to vary a German experiment on guinea-pigs. Next, two calves were injected ten times with cultures of typhoid bacillus; from the calf serum and typhoid bacillus experiments guinea-pigs Nos. 13 and 14 suffered illness and death, one escaping with illness. A fifteenth guinea-pig died from the next experiment, two being made only a little less lively. Later, five guinea-pigs were experimented

on in the laboratory, "with the result that they were all quiet that evening;" two of them by-and-by died (deaths sixteen and seventeen); four more were made ill and recovered, but as a fifth, which ought to have died, recovered too, no conclusion could be drawn from this series of experiments. Hence the experiments were repeated with five guinea-pigs. One died, as was expected (No. 18), two "were quiet and off their food," and one at last died (No. 19) on the sixth day, "greatly emaciated and with congestion of the peritoneum." The other had recovered on the third day; of the remaining two, one died on the third day (twentieth guinea-pig sacrificed), the other recovered in the same time.

After all this Dr. KLEIN confesses that "it is obviously impossible to draw definite conclusions from these experiments, seeing that their number was not sufficiently large. They all, however, show that the injection of 0.25 c.c. of the serum per peritoneum shortly before similar administration of the fatal dose of typhoid culture tends to prevent the fatal result which would otherwise ensue." Perhaps after this the *Daily News* will—certainly it ought to—concur in the anti-vivisectionist opinion of Dr. KLEIN, and also condemn the waste of animal suffering in groping for the means of solving a problem the solution of which, the more it is pursued, seems the further to recede from the vivisector's grasp. The extraordinary thing is that although Dr. R. THORNE THORNE, the Chief Medical Officer, in his summary report says "this microbe"—that is the one experimented with by Dr. KLEIN—"has not yet been proved experimentally capable of inducing a disease that is unequivocally of the nature of enteric fever," he goes on calling it "the typhoid bacillus," just as though the opposite were the case. Surely this is but the travesty of science!

WEIGHED AND FOUND WANTING.

IN no quarter is the old saw about "lies and statistics" better exemplified than in the attempt of the Vivisectionists to justify their horrid work in the eyes of the world by the manipulation of figures. It has so often devolved upon us to point out the fallacies of vivisection statistics, that it is a relief when we find, as we not infrequently do, the work of exposure done for us by members of their own camp. So far as we know Dr. LENNOX BROWNE has never expressed disapproval of vivisection as a method. In the matter of the anti-toxin treatment of diphtheria he has, however, shown his capacity for taking an independent view of the situation; and the result of his examination has been that he is unable to endorse the great chorus of praise (the medical profession has a way of singing in chorus) that has gone up from all quarters in honour of BEHRING and his serum.

The publication of the Report on the use of anti-toxin in the hospitals of the Metropolitan Asylums Board (March 25th, 1896), has given Dr. LENNOX BROWNE a text, on which he bases an article communicated to the

July number of the *Contemporary Review*, and we commend the article to the careful consideration of all who wish to build conclusions on statistics supplied from medical sources. The loopholes by which vitiating fallacies can enter appear to be endless, and the ease with which desired conclusions can be reached by the simple expedient of shutting one's eyes to the fallacies is charmingly exemplified in the said Report, and in many other reports of anti-toxin treatment. One instance DR. LENNOX BROWNE quotes from the *British Medical Journal* of June 8th. A Report on the treatment from the Provincial Governments of Croatia and Slavonia states that "Those cases which were brought to the authorities too late—for example, on the 6th, 7th, or 8th day of the disease, or later—were not treated by the serum, as it was then useless, and would have *spoil the statistics*." Truly it would have spoiled them, if their sole object was to support the treatment; but unless cases in all stages are included no true comparison with other methods can be made.

Another important point brought out by DR. LENNOX BROWNE is the inclusion of cases as "cured" within a few days of the commencement of treatment, when it is a well-known fact that diphtheria often kills by its sequelæ long after the acute stage is past. The effect of this is illustrated by reference to a report of the Director of the British Institute of Preventive Medicine, who recorded in the *Lancet* and *British Medical Journal* of February 2nd, 1895, a mortality of two out of 43 cases treated at the North-Western Fever Hospital, which was 4·6 per cent., the "lowest mortality on record." On this DR. LENNOX BROWNE comments:—

"Nothing could be more misleading, for this Report was applied for after little more than three weeks of official trial of the remedy at this hospital, and more than one of the cases had been admitted only a day or two previously.

"Within two days of the publication of these figures this mortality of 4·6 became over 8 per cent.; three weeks later it was 19 per cent., and at the end of four months, on 100 cases, in which these 43 were included, the mortality was 27; in effect the same as had been obtained in this hospital for the two previous years, under older methods of treatment, on nearly 2,500 cases. At the end of the year the mortality on 363 cases treated with serum at this hospital exceeded 32 per hundred.

"No allusion would have been made to these circumstances had a corrected record of these premature reports been offered; but as they stand they have gone forth to the world, carrying with them much unjustifiable encouragement, which it appears a plain duty to modify."

Another source of fallacy is to be found in the mixing of treatments. If anti-toxin is such a perfect cure, surely common sense would say that no other treatment is required at the same time. And if any comparison between methods of treatment is to be drawn, these methods must not be mixed on the same patient. But what do we find? In spite of the administration of anti-toxin, there is no relaxation of the usual methods. Well may DR. LENNOX BROWNE ask:—

"What does this anti-toxic serum counteract? Is it that by its means the patient is more quickly cured of the suffocative

membrane? Why, then, in these cases are sprays—e.g. of a solution of carbonate of soda, a long established method of loosening the membrane—still employed? Is it that the serum destroys the bacilli—the specific cause of the disease? Why, then, use germicidal solutions—e.g. of corrosive sublimate—of a concentration—1 in 1,000—of almost infanticidal intensity?"

The foregoing criticisms were made [by DR. LENNOX BROWNE before the Report of the Metropolitan Asylums Board appeared, and everything that appears in the latter tends to confirm their correctness. Here is DR. LENNOX BROWNE's summary of the Report's claims:—

"The Report claims, however, that there is a reduction in the death-rate from diphtheria during the year 1895 of 7 per cent. over that of the previous year (1894), and that the whole credit for this decrease in mortality must be assigned to anti-toxin; but on no logical ground can this claim be conceded. It is true that there has been a reduction on the total death-rate from diphtheria of 7 per cent. during the past year; but that this has been brought about by the use of the anti-toxic serum is by no means proved, and is, in fact, in direct contradiction of the truth. We have accounted for three-fifths of the cases treated with anti-toxin. In the remaining two-fifths, 1,347 in number, no anti-toxin was administered, and they were treated by methods which are carefully stated in the Report to be exactly the same as those in vogue before the introduction of serum-therapy. The deaths in this series were 181, giving a mortality of less than 13½ per cent., and it is this reduction in the mortality of the non-serum treated series which mainly accounts for the 7 per cent. reduction in the mortality for 1895."

The real cause of the reduction in the death-rate, according to DR. BROWNE, is the increased care and attention given to the patients, under the newly-awakened interest in the disease. The pretence that only severe cases were treated with anti-toxin, and that all the rest were "mild," is ably exposed by DR. LENNOX BROWNE. The Report actually states that "in a certain number of patients, being moribund at the time of their arrival, and beyond the reach of any treatment, no anti-toxin was given." These anything but "mild" cases were therefore included in the non-anti-toxin class, of which they went to swell the mortality.

The important question of age periods is thus dealt with:—

"The Report continues, 'It is obvious that to compare the mortality of those treated with anti-toxin with that of those which during the same period were not so treated, would be to institute a comparison between the severe cases and those of which a large proportion were mild. This would be clearly misleading.'

"Not at all. It is the Report which misleads. For the comparison of the gravity of the cases at age periods is not to be obtained by a difference of numbers in the respective classes, but by the proportionate death-rate at those years of life in which 'the fatality of diphtheria is (so) notorious,' that in point of fact no case under five years of age can ever be said to be mild.

"The following summary illustrates the position.

1894	Mortality under 5 years	without anti-toxin	47·4	per cent.
1895	"	" with "	37·4	"
1895	"	" without "	26·8	"

"Thus the mortality of cases treated without serum under five years in 1895 is more than 20 per cent. less than that of

those treated under the same conditions in 1894, when it was 47·4; and more than 10 per cent. less than that of the serum-treated cases in 1895."

The experience of Mr. DEMETRIUS BOULGER communicated to the *Contemporary Review* of February 8th, and in a letter to the *Daily News* of April 17th, is alluded to. He was a patient in the North-Western Hospital, and he collected statistics from October 1st to December 31st, 1895, of 193 cases. Of 58 treated with anti-toxin, 34 died, or 58·6 per cent. Of 135 treated without anti-toxin, 20 died or 14·8 per cent.

A very important matter in the anti-toxin treatment is the health of the animals from whom the serum is taken. It has been very largely overlooked, but not entirely. Dr. SIMS WOODHEAD has noticed that horses "differ enormously as regards the amount of toxin that may be introduced without setting up any very great rise of temperature or great local swelling. I have, however, come across two animals in which there seemed to be such a very great susceptibility to the action of diphtheritic toxin that it was almost impossible to give small enough doses to produce anything like the reaction that we wished." Dr. LENNOX BROWNE is answerable for the following gruesome statement:—

"It has also been reported that a certain 'white horse' had to be destroyed, because in those patients—who survived injections of serum derived from this source—local abscesses and skin eruptions were unduly frequent. We have, however, no statistics to show in how many cases death was mounted on this particular white horse, and it is not unfair to assume that the fatalities with serum derived from it have been in excess of those treated with serum from other horses which did not produce these abscesses and other complications with equal frequency."

Dr. LENNOX BROWNE alludes to the case of the death of the infant son of Prof. LANGERHANS, which occurred immediately after a prophylactic injection, and maintains that it is by no means solitary. Here is his significant comment upon it, and also upon the stupidity of attempting to first test the serum upon an animal.

"It is very evident from the facts of this case, which are typical of a gradually increasing class, that there is a certain element of danger in the serum, which cannot be guarded against by experiments on the horses, and can only be tested by the effects of their serum on the children. Special instructions, indeed, have been given from the laboratories that notes should be made by the attendant physician of the number indicating the horse from which the serum is taken in each case, so as to judge of the proportion of ill-effects produced by the anti-toxin from different animals—a procedure which bears a perilously close relationship to human vivisection.

"The suggestion has been recently made in all seriousness by an American physician, with experience of three rapidly fatal results of injection, that the possibility of the presence of a poison should be excluded by a preliminary trial on a cat. Having regard, however, to the proverbial nine-power resistance of this domestic animal, the patient might die, or happily recover without the treatment, while these preliminary experiments were in progress."

With this extract we must take leave of Dr. LENNOX BROWNE's most able article, for which all lovers of truth owe him thanks; at the same time we tender him our

congratulations on having kept his head cool whilst so many of his medical contemporaries have been losing theirs all around him.

VIVISECTION AND THE HOSPITAL SUNDAY FUND.

The following memorial has been presented:—

To Sir Sydney Waterlow, Bart. (Chairman), and the members of the Council of the Metropolitan Hospital Sunday Fund.

SIR AND GENTLEMEN,

We, the Executive Committee of the Victoria Street and International Society for the Protection of Animals from Vivisection, desire to draw your attention to the fact that the vivisection of animals is practised in connection with the medical schools attached to several of the leading London hospitals.

The following are the names of the hospitals with medical schools attached in which the practice is carried on, with numbers of vivisectionists shown in the last Parliamentary Return as having been at work in the laboratories:—

University College	...	...	16	Vivisectionists.
King's College	...	...	8	"
St. Bartholomew's	...	...	12	"
Guy's Hospital	...	...	6	"
St. Mary's Hospital	...	...	2	"
St. Thomas' Hospital	...	...	5	"
Charing Cross Hospital	...	...	2	"

We are strongly of opinion that this connection between hospitals and vivisection is prejudicial to the cause of charity, and the inflow of subscriptions for the benefit of the sick poor of the Metropolis, many charitable persons feeling it impossible to support by their contributions a practice which they regard as unjustifiable.

We therefore pray that your committee may resolve to exclude such hospitals from participation in the funds publicly collected, and to notify that this has been done, as we believe the result would be to give satisfaction to many, and lead to an increase in the contributions, which are prejudicially affected by the loss of public confidence in the present system.

Signed on behalf of the Executive Committee.

ERNEST BELL,

CHAIRMAN.

20, Victoria Street, Westminster.

July 6th, 1896.

Subsequently to the above the following letter was also forwarded to Sir Sydney Waterlow:—

Victoria Street and International Society for the Protection of Animals from Vivisection.

20, Victoria Street, London, S.W.

July 13th, 1896.

Sir Sydney Waterlow, Bart, Chairman of the Council of the Metropolitan Hospital Sunday Fund.

SIR,—Permit me to draw your attention to the enclosed letter and paragraph printed in the *Daily Chronicle* of the 11th inst., which corroborates the statement made in my letter of the 6th inst., with regard to the intimate connection between vivisectional laboratories and the hospital wards.—Yours faithfully,

(Signed) ERNEST BELL,
Chairman of Committee.

[ENCLOSURES.]

I.

A TERRIBLE STORY.

THE EDITOR OF "THE DAILY CHRONICLE."

SIR,—I feel compelled to enter a protest in your columns against an evil which has increased tenfold the already trying and weary hours of night duty in hospital. I refer to the distressing howling and moaning of dogs coming from buildings opposite the hospital, where licensed vivisection is carried on to a larger extent I believe than anywhere else in London, pointing clearly to the cause. It is not only that these sounds are so terribly distressing and appalling to the feelings of the

nurses, but they disturb the patients, and were especially awful when heard, as was the case a few nights ago, by the watchers at the bedside of a nurse who (after having spent four years of unselfish work in this hospital) was then actually dying, and whose last moments on earth may have been disturbed by these dreadful sounds.

If vivisection in the extreme form that some medical men seem to consider necessary in the prosecution of theoretical research is to be permitted, surely it should be practised elsewhere than in such close proximity to a large hospital.

A HOSPITAL NURSE.

July 10th.

II.

We respectfully call the serious attention of the Home Office to the very startling accusation which is brought by "A Hospital Nurse," in the letter which we print to-day, against a certain licensed vivisection laboratory, the name and address of which we hold back for the present, though the information in our possession is, of course, at the disposal of the authorities. We are not fanatics on this subject, and we don't assume the truth of the statements, but we confess to a sense of peculiar horror at the thought of the nightly howling of these tortured animals, mingling with the terrors of the dying in the dreary wards close by.—*Daily Chronicle*, July 11th.

[After investigation, the *Chronicle* subsequently stated the facts were not quite so strong as alleged; but the "Hospital Nurse" again wrote, maintaining that all she had said above was true.—*Ed. Z.*]

FURTHER PASTEURIAN FAILURES.

The following appeared in the June issue of the *Annales de l'Institut Pasteur*:—"Person dead of hydrophobia after treatment. Labat, Pierre, aged 37, customs officer at Bordeaux. Bitten in the night of the 21st-22nd February, treated at the Pasteur Institute from the 25th February to the 16th March. Died of hydrophobia on the 24th of May, at St. Andrew's Hospital, Bordeaux. Labat had been bitten on the left thumb and on the head. On the back of the thumb there were two longitudinal wounds extending over the first and second joints, three centimetres long and somewhat deep. The wound on the head, left side, was larger, and had to be stitched. It bled freely. The whole of the wounds were cauterised with a red hot iron two hours after the occurrence. The dog fled and was not traced."

A telegram from Pau informs us that a child, a native of Navarreux, who was bitten by a rabid dog and had undergone the treatment at the Institut Pasteur of Paris, has just died in the midst of atrocious sufferings. In the same district another case of similar description happened two months ago.—*Il Secolo*, of Milan, June 26th.

The Paris correspondent of the *Daily News* sent the following to that journal on the 30th ult.:—"A little child of Sauvagnon, a village near Pau, bitten six weeks ago by a dog said to be mad, died yesterday morning of rabies. The child had returned on Saturday from the Pasteur Institute in Paris." We learn from the *Indépendant* of Pau (June 30th) that the child here referred to was named Chapelier-Martin, and was fourteen years of age. She was badly bitten and had only returned from the Pasteur Institute three or four days prior to being attacked with the malady. This, the *Indépendant* adds is the fourth death of the kind in the department since the 1st of January.

FATAL ISSUE NEAR MANCHESTER.

The *Manchester Guardian* (July 17) reports as follows:—"On the 20th of November last a man named Thomas Openshaw, who kept a hairdresser's shop in Cross Lane, Radcliffe, was informed that a mad dog had attacked a lad near to his premises. In driving the animal away, he fell to the ground. The dog pounced upon him, caught him by the hand, and bit three of his fingers. Others came on the scene, and the dog was shot. Openshaw washed his wounds, and then went to the surgery of Dr. Arthur Sellers to have the wounds dressed, and the dog was taken to Dr. Packman, of Bury, who said it was the worst case of rabies he had ever seen. The following day Openshaw was taken to the Pasteur Institute by Mr. J. Sharples (clerk to the District Council), where he remained three weeks, and returned apparently cured. On Sunday (July 12th) he was troubled by severe pains which started from his hand and went up to his neck. Dr. W. Sellers was called in the following day, and every effort was made to relieve him; but he grew worse, and, after great suffering, died on Tuesday

night, the symptoms of hydrophobia having been pronounced. An inquest was held on Wednesday, when a verdict was returned that the deceased had died in consequence of having been bitten by a dog suffering from rabies.

THE STOCKPORT CASE.

A statement appearing in the *British Medical Journal* of the 4th ult., on the authority of the medical men engaged, gives the following additional information in regard to this case:—

"The lad's wounds were washed immediately with carbolic acid, 1 in 20, and together with six others he went to Paris under the charge of Dr. Charles Porter, M.O.H. for Stockport. On the morning of March 8th, 1895, five days after being bitten, he received at the Pasteur Institute the first of a series of antirabic inoculations by the 'ordinary method.' These were repeated on each of the following seventeen days. The treatment was completed, and the patient left for home on March 27th, 1895. Dr. Porter informs us that the lad suffered continuously from *malaise* after this date, and complained frequently of pain in the wrists, knees, ankles, and at the points of inoculation in the abdominal wall. About three weeks before death he experienced tingling in the injured hand and arm, and a day or two before his illness became acute there was marked coldness and loss of power in the limb, so that he frequently dropped the tin vessel which it was his duty to lift. On June 18th, 1896, he was so ill that he was sent home from the mill, and at 1 a.m. on June 19th he woke up and continued to cry out with the pain in the bitten arm. Dr. G. P. Henderson, who saw him at 7 a.m., informs us that he had then many of the symptoms of rabies, including violent spasms of the respiratory muscles on any attempt at swallowing. Towards night his condition grew worse, and he suffered from epileptic and then tetanoid convulsions. He died at 2.30 a.m. on June 20th, with characteristic symptoms of hydrophobia."

CORRESPONDENCE.

THE PASTEUR TEST FOR RABIES.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Will you kindly permit me to supplement slightly Mr. Collinson's recent letter on the Pasteur test for rabies? The opinion of several eminent medical experts is cited by him in support of the statement that the paralytic and other morbid nervous symptoms which ensue when the supposed rabies virus is thrown in contact with the surface of the brain of an animal by trephining are such as would result from the introduction of any foreign matter by the same method, and are consequently no evidence that the dog from which the matter was taken was rabid. The misleading nature of such a test seems self-evident, for the contact of any foreign matter with an organ so delicate as the brain, the structure of its tissue being more exquisite than frost-work or the petal of the most ephemeral flower, must necessarily induce the most confusing symptoms. The irritation set up in any point of the cerebral cortex by the presence of foreign matter, would, of course, speedily induce sub-acute inflammation, resulting in slow disorganization and sloughing of the brain-structure, the result being delirium, and spasms and convulsions of the bodily organs as in a state of inflammatory disintegration. The question is such a serious one as to demand the immediate attention of the authorities concerned, as so long as a futile and misleading method of diagnosis is employed, the rabies scare, which has so long been terrorising the public, will unavoidably increase and extend.—I am, Sir, yours truly,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

HUMAN VIVISECTION.—Human vivisection is now talked about by the scientists. The American paper called *Science* has stated that in a certain event human vivisection must be resorted to. I quite agree with my American contemporary. Human vivisection is the only logical future of the system. The vivisection of animals has led us wrong in many instances, and, considered as anything more than surgical practice, it has always been useless; though the vivisectors, eager in the pursuit of what I suppose they call a noble curiosity concerning the laws of nature, try to deceive themselves and the public into the belief that it has had practical results.—*To-day*, July 4th.

Obituary.

SIR GEORGE HAMPSON.

IN the late Sir George Hampson, Bart., of Thurnham Court, the Victoria Street Society has lost a consistent friend and constant supporter for twenty years. Sir George's sister, Miss Hampson, of Debtling, has been during the same long period one of the most active of our Hon. Corresponding members.

OUR CAUSE IN THE PRESS.

THE HOSPITALS AND VIVISECTION.

(FROM THE "PRESBYTERIAN," JULY 9TH.)

SIR,—Your correspondent, Dr. Ferguson, protests against your statement "that in some cases experiments have been tried on human subjects," and demands concrete and authenticated facts on which such statement is based.

It seems rather late in the day to be asking for proof of what everybody competent to judge knows to be the fact, although they are not all inclined to admit it. In that well-known book by Professor Lombroso entitled, "The Female Offender," he says (p. 89), "Consumptive patients, pregnant women, may be manipulated, even to their hurt, by thousands of students for the good of science; but criminals—Heaven forbid!"

In the December, 1895, number of the *Thier und Menschenfreund*, we are informed that Professor Dr. Schreiber, by permission of Professor Dohrn, the director of a lying-in hospital, injected tuberculin into forty new-born healthy babies for the purpose of studying Koch's supposed remedy for consumption.

In the same journal we read that Dr. Schimmelburch took matter from an abscess in the ear of a girl, made a "culture" from it, and then inoculated with it the calf of a boy who was suffering from blood-poisoning. The boy died a few weeks later. These experiments had nothing whatever to do with the treatment of the cases, but were purely scientific investigations.

A few years ago Drs. Ringer and Murrell published in the *Lancet* the results of certain experiments they performed on hospital patients with nitrite of sodium; they said, "In addition to these experiments, we have made some observations clinically. To eighteen adults—fourteen men and four women—we ordered ten grains of the pure nitrite of sodium, and of these seventeen declared that they were unable to take it." The results were so serious that the *Medical Times and Gazette* of Nov. 10th, 1883, characterized them as "useless and cruel." Then Dr. Armand de Watteville, writing in the *Standard*, November 24th, commenting on the matter, said, "I think we, as medical men, should not attempt to conceal from the public the debt of gratitude they owe to the *corpora vilia*—for such they are, and will be, as long as the healing art exists and progresses. So far from there being a reason why moral and pecuniary support should be refused to hospitals on the ground that their inmates are made use of otherwise than for treatment, there is even ground why more and more should be given to them, in order to compensate by every possible comfort for the discomforts necessarily entailed by the education of succeeding generations of medical men. . . . The few must suffer for the many."

If Dr. Ferguson will turn to the current number of the *Journal of Physiology* he will see a paper by an eminent hospital physician, "On the Action of Large Doses of Dilute Mineral Acids on Metabolism." He states that he performed experiments with these acids on three hospital patients by giving them each 360 minims of a mineral acid (dilute) daily. We are told that in one case the treatment of the disease from which the patient was suffering "was suspended for several days prior to the commencement of the experiment." I do not say that the experiments were cruel, but they were experiments in physiological chemistry, and as such not precisely what hospitals are supported for. If your correspondent

desires more "concrete and authenticated facts" I can give him any number.

I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S.

June 27th, 1896.

THE GADARENE SWINE ONCE MORE.

(FROM THE "HAMPSTEAD EXPRESS," JULY 11.)

SIR,—Your correspondent Delta does not seem to be improving his position. The story of the Gadarene swine is a dangerous one to introduce into the argument, and has proved a pitfall to many before him. It is very characteristic of the arrogant minds of the vivisectors—who are specially licensed to outrage the moral laws which govern humbler people—that so many of them quietly, naturally, and without a qualm, assume the position of our Saviour. But, if Delta will look into his Bible again, he will find that in the analogy, if analogy there is any, the vivisectors are not represented by Christ, but by the devils. It was they who, just like the physiologists, begged to be allowed to torment the swine for their own wicked ends. That they were permitted to do so is only the same inscrutable mystery as that their analogues are still permitted to carry on their cruel work on earth.

It is not I this time who has been guilty of this strong language. It is Delta himself who has called them devils. A man is never so likely to speak the truth as when taken unawares, and Delta has unconsciously this time shown us how he characterizes the vivisectors' work when his mind is not biased by the hope of some material gain resulting from the evil. I thank him, and remain,

Yours, etc.,

ERNEST BELL.

2, Thurlow Road.

P.S.—That we are "of more value than many sparrows" is surely rather an inconclusive reason for torturing the said sparrows. Does the same principle apply, in Mr. Delta's opinion, to other people's cruelties, or only to those of vivisectors, and, if the latter only, why so?

HOME INTELLIGENCE.

LONDON.

THE INDEPENDENT ANTI-VIVISECTION LEAGUE.

The general meeting was held on Tuesday evening, July 7th, in St. Martin's Town Hall, London. The special work in which this Society engages is the circulation of literature on the subject, each member engaging to send or give away a certain number of papers monthly. Mrs. Mona Caird chiefly originated the Society.

Colonel Coulson, who presided, said he would not take the position as chairman were he not perfectly satisfied that the pain inflicted on animals by vivisectors was far greater than any that was necessary for merely taking their lives. Vivisection caused suffering that was abominable and unwarranted. One of the chief surgeons of London told him a few months ago that although he believed to a certain extent in vivisection, he thought it was most disgracefully overdone, and experiments were tried from which no possible good could accrue. He did not claim to be scientific, but he claimed to possess a certain amount of understanding, and to know what was right or wrong, and he was sure that nothing could possibly justify the awful atrocities that went on under the vivisector's knife.

Dr. Dudgeon proposed the following resolution:—"That this meeting is of opinion that vivisection as a method of research is, in its nature, empirical and unscientific; and that it is harmful to human beings, even could certain valuable discoveries be made by its means, seeing that the human race must inevitably be injured by consenting to benefit, if this might be, through cruelty and organized selfishness." Speaking in support, he said that hardly one in a thousand of those in the medical profession was a practical vivisector, but they may be fascinated by the promises held out by vivisectors. One of the most important series of experiments was those made in the interest of what is called pharmacology. It meant the testing on animals the effects of

slow and quick poisons and drugs, and physiologists had assured them that that was the only true way to advance medicine, but, latterly, a great blow had been given to pharmacology, so that it would not be able to raise its head again. This had been given by the College of Physicians in London; they had excluded pharmacology from their curriculum of medical studies. He quite agreed that the researches of vivisection were misleading and unscientific.

Mr. Herbert Burrows, in seconding the resolution, said that the characteristic of the latter half of the nineteenth century could be summed up in the word "science;" but as anti-vivisectionists they asked that science should be applied to its true object, and not debased or degraded by the very people who ought to uplift and elevate it. The vivisectionist who was not prepared to carry on vivisection on himself was a coward. Vivisection bred an incarnate selfishness, because no other than an intensely callous man could stand the writhings of an animal under his knife.

Mr. R. Somerville Wood next addressed the meeting. He said he hoped that strong pressure would be brought upon the Government to prevent the establishment of a Pasteur Institute on the Chelsea Embankment.

Mrs. Charles Mallett, in supporting the resolution, said that she had had to confront Professor Horsley on this subject, but they had not much to fear from him.

After the resolution had been put to the meeting and carried unanimously, a vote of thanks to the chairman for presiding terminated the proceedings.

THE PIONEER ANTI-VIVISECTION SOCIETY.

The Pioneer Anti-Vivisection Society held an indignation meeting at the Pioneer Club, Bruton Street, London W., on Friday, the 17th ult., for the purpose of protesting against the official registration of the new building on the Thames Embankment—the British Institute of Preventive Medicine—as a place where experiments on living animals can be performed. Strong resolutions were passed pledging the meeting—a crowded one—to energetic action in opposing the registration. The speakers were Mrs. Massingberd, Mrs. Fenwick Miller, Miss Goff, Miss Abney Walker, Miss Fergusson-Abbott, and Mr. R. S. Wood.

NEW MALDEN (SURREY).

On Saturday afternoon, June 20th, a public demonstration to protest against vivisection took place on the green opposite the drinking fountain. The meeting, which was of an enthusiastic nature, was convened by the local Band of Mercy. About three o'clock the members of the village brass band met at the railway station and headed a procession, consisting of the members and friends, to the green. The chair was taken by the Rev. W. A. Challacombe, and there were also present the Rev. T. Cave Moyles, Rev. O. Heywood, Rev. S. H. Moore, Col. Coulson, J.P., of Newcastle; Mr. R. Somerville Wood, of the Victoria Street, Mr. A. Westcott, for the London Anti-Vivisection Society; Miss Woodward, Hon. Sec. Society for United Prayer for the Prevention of Cruelty to Animals, and others.—In his opening remarks, the CHAIRMAN denounced vivisection as unjustifiable and immoral, and made an earnest appeal to all present to do their utmost for its prohibition.—Col. COULSON then moved: "That this meeting convened by the New Malden Band of Mercy, for the total abolition of vivisection, protests in the strongest manner on true scientific, humanitarian, moral and religious grounds against experiments on living animals." He pleaded for a broader feeling of humanity towards animals, and said that much more might be done in Sunday Schools. Vivisection was utterly opposed to all the laws of God, and on that ground alone it must be denounced.—Miss WOODWARD seconded the resolution, which was carried unanimously.—Mr. R. SOMERVILLE WOOD said that if they agreed with vivisection they impugned the Deity of God and made Him a Being they could not respect or love. He spoke in favour of something practical resulting from that meeting and hoped that all would enrol themselves as members of his society, which had a four-fold object, viz. to educate the public, to expose the existing fallacies, to get the practice of vivisection abolished, and to pass a Bill prohibiting it. He moved:

"That this meeting impresses upon all members of Parliament the urgent need of passing measures to bring about the total prohibition of vivisection."—Mr. A. WESTCOTT seconded, and condemned the cruelties which were practised in hospitals, the class for whom they were intended becoming yearly more afraid of them. In Ohio, he said, they had endeavoured to get a law passed whereby criminals could be given up for the purposes of vivisection. He was sure none of them would ever agree to that. ("No.") Mr. Westcott gave instances of the harrowing cruelties practised on animals in the laboratories, and asked for the help of all to put them down.—Rev. S. H. MOORE supported the motion, which was carried.—A vote of thanks was tendered to the speakers, and a collection taken to defray the expenses of the meeting.

EASTBOURNE.

KINDNESS TO ANIMALS SUNDAY.—At the request of the Royal Society for the Prevention of Cruelty to Animals, the Vicar of Eastbourne (the Rev. H. Bickersteth Ottley) preached a special sermon at St. Mary's Parish Church on Sunday morning, June 30th, from the text "Be ye merciful." He referred to the cruelties inseparable from pigeon shooting, and to the fact that the wearing of aigrettes by ladies led to the destruction of beautiful birds. For a moment Mr. Ottley referred to the question of vivisection, and mentioned some painful facts in connection with the practice.

NEWTON ABBOTT.

The Rev. W. E. Durham, the Rector, presided on midsummer day at the annual meeting of the local Society for the Prevention of Cruelty to Animals. Captain Quintanilha, the hon. sec., who maintains the work in the highest state of efficiency, referred in his report to vivisection. He said: The anti-vivisection movement is gaining adherents and strength everywhere. In Church, State, Art, Literature, Science, Law, a more healthful spirit prevails, and eminent men and women are coming forward and enrolling themselves as anti-vivisectionists. There is every reason to hope that before long a great change of opinion will take place in regard to vivisection, and such a revulsion of feeling will be manifested as to ensure a complete triumph for the cause of religion, humanity, and morality, against which vivisection offends.—The Rector, when in the chair at the annual meeting, referred to the subject by saying that if experiments were to be made at all it must be under conditions absolutely painless. The infliction of pain on the lower animals was immoral, and if they were benefited by the result of such pain they ought to be ashamed to accept it. (Applause.)

BRISTOL.

During the last few weeks Mr. T. A. Williams has addressed many large meetings in the parks around Bristol, and distributed great numbers of pamphlets. Meetings have been held repeatedly in the Victoria Park, Eastville Park, Durdham Downs, and the centres of population in the city. Many questions have been put to the speaker, and the discussions have sometimes lasted to a late hour, the interest being maintained to the last. Several clubs as, a consequence, have invited lectures upon the question of vivisection to be delivered during the winter course. Resolutions have been passed pledging the meetings to do all possible in agitating against this cruelty.

On Saturday evening, July 11th, at the Rescue Lodge of the Sons of the Phoenix, Mr. T. A. Williams gave an address upon "The many aspects of the vivisection question," Mr. Tremlett presiding. The speaker said cruelty was a curse to the world. It arose from selfishness and cowardice, and should be discouraged everywhere. Cruelty in science was a retrograde movement. Mr. John Irwin proposed "That this meeting believes every form of cruelty to be against the best interests of men, also that vivisection is useless to medicine and a danger to hospital patients, and it desires its prohibition by law." Mr. Gengory seconded; and Mr. S. Thomas having spoken, Mr. Barrington proposed hearty thanks to Mr. Williams for his address.

THE SCOTTISH SOCIETY.

EDINBURGH.

A memorandum by Bailie Pollard, chairman of the Health Committee, has just been issued to the members of the Corporation, on the Fever Hospitals on the Continent, with reference to the new City Hospital about to be erected at Colinton Mains, Edinburgh. After stating that he had visited the Infirmarys in Paris, Basel, Zurich, Innsbruck, Budapest, Prague, Dresden, Berlin, Hamburg, and Copenhagen, he enters into a description of each, setting forth the general results of his inspection in relation to the construction of the new Fever Hospital in a summarized form. He admits that in no place did he find a lower mortality than an average of ten to twelve per cent., which is nearly double what has taken place in the Edinburgh Hospital for many years. Notwithstanding this admission he suggests the provision of a laboratory in connection with the Edinburgh Hospital as is done in the places to which he refers. He closes his memorandum as follows:—

"What I desire mainly to urge, with regard to the Hospital as a teaching institution, is, that in constructing our new Hospital, the city will have a unique opportunity to render, at a comparatively trifling cost, one of the most valuable services to the Edinburgh School of Medicine that it has ever received. That service lies in providing adequate laboratory accommodation for bacteriological research, and for the investigation of the whole natural history of all kinds of febrile disease. The Edinburgh School has never yet been able to take its proper place in relation to this all important field of inquiry.

"The prosperity of its medical schools tends, in no small degree, to the general prosperity of the city. Whatever, therefore, the city may do to promote the interests of the medical school, famous as it has been and is still, will be in reality a contribution to the best interests of the city itself.

"Down to the present time almost all the material which our increasing Fever Hospital affords for scientific investigation has gone to waste. Notwithstanding what has been generously provided by the Royal College of Physicians at its own charges, we have no adequate means of conducting such systematic inquiry as that which is carried on in the principal medical centres of the Continent. The opportunity to meet this great defect now lies at our hand. In every well-appointed Fever Hospital on the Continent, but especially in Germany, well-equipped laboratories are found where students and graduates conduct methodical and patient investigation into every aspect of every kind of infectious disease.

"There is also provided a museum for the preservation of preparations made by the investigators, and there is likewise, adjoining the laboratories, a well-constructed *post-mortem* room with requisite appliances.

"Let it be the graceful part of the city to provide the necessary accommodation for the purpose now pointed out, which it is now in a position to do in the simplest, most economical, and yet most effective way. It may be assumed that the medical school will not be slow to do its part in making the best use of facilities so provided."

As the Committee of the Scottish Society considered this memorandum an attempt on the part of its author to turn the Edinburgh Fever Hospital into a place not so much for cure as for investigation, they drew up and had inserted in all the local newspapers the following resolution:—

At a meeting of the Committee of the Scottish Society for the Total Suppression of Vivisection—the Rev. J. Baird presiding—the following resolution was passed:—"The committee having considered the memorandum by the convener of the Public Health Committee on the matter of Fever Hospitals, in which he urges, for the purpose of promoting the interest of the medical school, the establishment of a laboratory at Colinton Mains, such as obtains in Germany (where vivisection is a leading feature), deeply regret the recommendation of any such proposal, and while approving of investigation into the nature, causes, and prevention of disease by the proper methods, resolve to oppose any provision being made by the Corporation for vivisection in the new Hospital. The committee, while doubting the competency of the Corporation to burden the rates for laboratory purposes of any kind, entertain the hope that in settling the plans the representations of the convener will be disregarded."

THE BUDA-PESTH CONGRESS.

The Rev. John Baird attended the International Congress for the Protection of Animals, held at Buda-Pesth on July 18th-21st, as representative from the Scottish Society for the Total Suppression of Vivisection.

FOREIGN INTELLIGENCE.

GERMANY.

ANIMALS KEPT WITHOUT WATER AND FOOD.

The *Thier-und-Menschenfreund* publishes the following:—

"Every layman is fully aware of the great importance of water to life; but not so the scientists, who seem to think that the only way to establish this truth is by means of horrible experiments. Thus, in the *Archiv für pathologische Physiologie und Anatomie*, edited by R. Virchow, vol. 139 (1896), p. 155, appears an article on 'the effect on animals of keeping them without water,' which treats of some experiments made in the Pathological Institute of the Royal University of Palermo, by Dr. G. Pernica and Dr. G. Scagliosi. Here are some extracts:—

"(a) Our experiments show the importance of water to life.

"(b) In the case of our dog, death occurred after it had been eleven days without water, during which time it lost 24.25 per cent. of its weight. A few days before its death it lost all desire for food. Female dogs, on the contrary, which were kept without solid food, but allowed 150 cubic centimeters of water daily, lived forty-three days.

"(c) The results agree with those published by Lepard in December, 1886: general weakness, extreme lassitude, and disturbed circulation and breathing, following quickly upon one another. Our hens died between eight and ten days after being deprived of water, but fed well up to the day of death.

"After this follows an account of the histological condition of various organs, very precisely set forth, and of other such matters discovered by means of the microscope. Highly satisfied with their investigations these great *savants* conclude by attributing the death of their victims to the want of water checking the circulation and causing atrophy, and more or less extensive inflammation of the tissues. The real cause, however, was the wanton cruelty of men masquerading as learned doctors of science."

In the *Archiv für experimentelle Pathologie*, vol. 33 (1894), pp. 414-461, an article is published in which the following is to be found:—

"Forty-four animals, consisting of cats, dogs, rabbits, guinea-pigs, pigeons, frogs, tortoises, and lizards were kept without food, but eighteen of them allowed to have water. In some cases during the period of starvation, and in other cases after the death of the animals, their organs were histologically examined. The consumption of water did not alter the character of the changes in the tissues, but only deferred them for a time, when they took place with all the greater intensity."

SWITZERLAND.

The *Thier-und-Menschenfreund* takes the following from the *Bülach-Dielsdorfer Wochen-Zeitung* of May 20th:—

"The most recent departure in vivisection is announced in the annual report of the High School Society of Zürich, where we read that the Society, probably as a demonstration in favour of vivisection, has paid the sum of 400 francs (£16) for a boring apparatus, to be used in the investigation of tetanus caused by a wound. When will innocent creatures cease to be exposed to such dreadful ill-treatment as the boring of a hole through the skull and the removal of the brain, piece by piece, a painful and reckless intrusion into the innermost and most mysterious vital functions? It is to be hoped that the Commission appointed by the Government Council, for the restriction of vivisection, will bring about some change in this matter. On May 12th, 1798, the use of the rack was abolished throughout Switzerland. When shall we hear of the abolition of all instruments devised for the torture of animals?"

CEYLON.

(FROM OUR CORRESPONDENT.)

We were all very pleased to hear of the most successful meetings you have had in connection with the anniversary of the Victoria Street Society. Whatever our opponents

may say, the object of the Society has the heartiest sympathy of all true friends of humanity, and the noble cause should ever be kept to the fore.

I am glad to tell you that our little magazine, the *Rays of Light*, is slowly but surely working its way among our Eastern readers. The fallacy of vivisection and an earnest effort to spread the truths of humane education are brought to their notice in each of its issues. We hope we will receive the aid and sympathy of all our friends to carry on the *propaganda* in the East.

It affords me pleasure to state that we are hoping to have increased accommodation at the Musaeus School and Orphanage, which is the Ceylon headquarters of the Anti-Vivisection Society, branch of the Victoria Street Society, and office of our little magazine, *Rays of Light*. The enlargement of the building will give us also more room for greater activities in all reform lines.

MADRAS.

The Hon. Mr. Ranganathan Nayudu, Secretary of the Anti-Vivisection Society here, sends us a letter from a Madras resident, to whom he applied for support to the anti-vivisection cause, and asks us to reply to it through the *Zoophilist*. The writer begins by saying, "I sympathize with any steps tending to the relief of dumb animals from cruel treatment, but I venture to think the saving of human life is of somewhat more importance." In the latter part of this sentence we cordially concur, but as it stands it is but a pious axiom. On the first part of the sentence we will say a word further on. The writer proceeds, "Moreover I happen to have some knowledge of the subject of vivisection and unhesitatingly assert that the pain inflicted on dumb animals is almost infinitesimal as anæsthetics are now always used." There are several fallacies in this passage. If the knowledge of the writer were other than imperfect he would be aware anæsthetics are not always used—there were 1500 experiments without them in Great Britain in 1894—he would also be aware that if there were there would be no pain. He also imagines that "faddists" support the anti-vivisection movement. Pasteur, he describes as "the greatest benefactor of his species of this century," and he seems to conceive that this kind of frothy statement is argument, and that, with naturally a cut at paid officials, proves the strength of his position. The gentleman is entirely mistaken: his assumed sympathy is imaginary, his assumed knowledge is prejudice, his assertion that anæsthetics are always used indicates lack of knowledge and is unfounded; and if he means to convey that vivisection has been the means of saving human life he has yet to give proof of the fact. The letter is childish and unworthy of serious notice, which it would not have had but for the courtesy due to our friend Mr. Nayudu.

BUDA-PESTH.

THE INTERNATIONAL CONGRESS ON ANIMAL PROTECTION.

AN ANTI-VIVISECTION RESOLUTION PASSED.

With much satisfaction we report a great triumph for our cause, gained at Buda-Pesth on July 20th, at the third meeting of the Twelfth International Congress for the Protection of Animals. After the usual preliminaries had been got through, three subjects in succession were brought before the Congress. The first by Frau Professor Dr. K. Széchy on "Animals in Captivity," with special reference to the reprehensible practice of keeping birds in cages; the second by Dr. Béla Plóss on the "Ill-treatment of Horses in Great Cities"; and the third on "Vivisection from the Natural History and Medical Science points of View," by Dr. Paul Förster. The sentiments and resolutions of the first two lecturers received the unanimous support of the Congress, and it was soon evident that those of Dr. Förster had the sympathy of the members, although no one imagined they would receive the magnificent support given later at the voting. In the course of a lengthy address, Dr. Förster asked, "What is the use to mankind of such experiments" (as those described by him)? and caused some amusement by adding, "These good-for-nothing torturers of animals ought to be transported to the land where pepper grows," referring to the French penal

colony at Cayenne. The lecturer concluded by asking the Congress to postpone the final decision on his resolution until the morrow. But this was not to be. Herr A. von Warnus said it was sad to see educated men practising and defending vivisection, and quoted, amid applause, the words of Dr. Hyrtl that "no vivisectionist could be a good physician." Herr Bergner having also spoken against vivisection, Dr. Schlenk, of Frankfort, rose, and, amid much opposition, declared that "from a scientific point of view vivisection was a necessary evil." He was supported by Herr Behringer, who advised the various Societies for the Prevention of Cruelty to Animals to advocate the use of vivisection for scientific investigations only, and with certain restrictions. Mr. Peabody, of Boston, U.S., met with great applause on saying that efforts should be made to obtain by law the prohibition of vivisection. Out of 2,000 American doctors, 500 had announced that they wished painful experiments on animals to be forbidden. Mrs. Mallet said that she opposed vivisection, viewing it from the divine, human, and moral standpoints. In England only 3 per cent. of the practitioners practised vivisection. Every man of feeling disapproved of it. After an interval, Herr Bretely (Graz) spoke against vivisection, and regretted that so few clergymen were members of the S.P.C.A. He was followed by the Fräulein Maria Tunguis and Sophie Groshans (Holland), and then by the Rev. John Baird (Edinburgh), Dr. Edward Berdoe (London), and Herr Dunckel (Leipsic), who all spoke energetically against vivisection. Pastor Kapff saluted Buda-Pesth, saying that he was a vivisectionist, but would limit his operations to those scientists who tortured innocent animals! Herr Fliegel (Zürich) was sorry that the Swiss people had recently voted in favour of vivisection, but hoped that on a future occasion they would reverse their decision. Herr Ohlsen (Rome) supported the practice of vivisection, but only to a limited extent. The meeting listened to his remarks with great impatience. After Pastor Landsteiner (Austria), Herr J. Graef, Baron Dr. Klerk had spoken the division took place, and Dr. Förster's resolution, that vivisection should be forbidden by law, was carried by 177 votes to 17.

THE PARIS EXHIBITION OF 1900 AND A PRELIMINARY ANTI-VIVISECTION EXHIBITION.

WE have already published in the *Zoophilist* a suggestion that in addition to preparing an Anti-vivisection Exhibit for the Paris Exhibition of 1900, there should be earlier organized an Exhibition of objects connected with Vivisection, such as models of vivisected animals, vivisecting troughs, tools and instruments, to be moved from place to place, for the instruction and education of the public as to what Vivisection really means and involves.

As we announced, the Committee of the Society approved the proposal, and, provided the funds be forthcoming, are prepared to undertake to see it carried out. It is anticipated that a considerable sum of money will be required for each of the objects, but most for the movable Exhibition. A subscription list has now been opened, and the following amounts have been already promised:—

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Hon. Mrs. R. C. Boyle ..		3 3
Tunbridge Wells S.P.C.A. Anti-vivisection Fund ...		2 0
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Further subscriptions and donations are requested, and these may be sent to the SECRETARY, 20, Victoria St., in the usual way.

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UNITED WITH THE

International Association

FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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Telegraphic Address: "Zoophilist, London."

THE TALE OF THE 291 DEAD.

[CORRECTED TO JULY 27TH, 1896.]

IMPORTANT TESTIMONY AS TO THE ACCURACY OF THESE STATISTICS.

Q. 2057.—Was this supplement to THE ZOOPHILIST of 21st [1st] July, 1887, giving details as to M. Pasteur's Necrology, before you when you were on the Pasteur Commission (handing the same to the witness)?—Yes, I think we had this statement before us.

Q. 2058.—Do you know whether it is accurate?—I believe it is; it seems to me to have been drawn up with great care.—Extracted from the Evidence of Dr. Lauder Brunton.—Report of Lords' Committee on Rabies in Dogs, 1887.

N.B.—It has been claimed on behalf of Pasteur that on dogs the success of his method was invariable. Had the analogy between dogs and mankind, therefore, been perfect, it should never have failed with the latter. It does fail, and so the experimental basis is discredited; but it is sought to rehabilitate it by saying that the average mortality is small. When persons bitten by dogs only suspected of being mad, and even those merely licked by dogs, are reckoned among the total treated, and a good many actual deaths are discounted, it is easy to make a low average. The honesty of the process is, however, another matter.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
INOCULATED IN PARIS.				1885:	1885:	1885:	1885:
1	Jacques Bonenfant...	Hospital Lariboisière, Paris ...	Dog	Aug. 30	Sept. 1	Sept. 7	<i>Journal de Médecine de Paris</i> , December 19 (1886.)
2	Louise Pelletier ...	Paris ...	Dog	Oct. 3	Nov. 9	Dec. 4	<i>Intransigeant</i> , December 8.
				1886:	1886:	1886:	1886:
3	Mathias Kakulev (or Kajoronoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	Mar. 23	Died at Hotel Dieu, Paris; <i>La France</i> , March 24.
4	Wladimir Phenogenoff (or Ivanoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	April 3	Died at Hotel Dieu, Paris; <i>Evénement</i> , April 4.
5	Peter Wasiliev Golowinski	Russia ...	Wolf	Mar. 1	Mar. 13	April 7	Died at Hotel Dieu, Paris; <i>Intransigeant</i> , April 18.
6	Dimitri Borowskoff...	Russia ...	Wolf	Mar. 25	April 5	April 20	Died in Paris; <i>Intransigeant</i> , April 22.
7	Ivanovna Schtcherbakoff ...	Russia ...	Wolf	Mar. 25	April 5	April 22	Died at Salpêtrière, Paris; <i>Petit Journal</i> , April 25.
8	A Woman (name unknown)	Wloekaveck, Russia	Wolf	...	...	May 31	<i>Ami du Peuple</i> , June 6.
9	(Name unknown) ...	Russia ...	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
10	(Name unknown) ...	Russia (at Moscoov)	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
11	Christin (aged 6) ...	Evian, Savoy ...	Dog	May 14	May 20	July 4	<i>Journal de Médecine de Paris</i> , July 18.
12	John Gagu (or Gager) ...	Roumania ...	Dog	May 11	May 25	June 7	<i>Daily News</i> , June 7.
13	(¹) Eloina Lagut (aged 11)	Dole, Jura ...	Dog	May 18	May 24	June 17	Exchange Company's Telegram, June 24.
14	A Woman (name unknown)	Russia ...	Wolf	...	...	July 6	<i>Lancet</i> , July 31.
15	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. }
16	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. }
17	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. }
18	Marius Bouvier (adult)	Grenoble ...	Cat	Apr. 30	May 4	July 21	<i>Le Temps</i> , Paris, July 22—25.
19	A Boy (aged 18) ...	Dordrecht ...	Cat	June 18	June 25	Aug. 4	<i>Daily News</i> , August 10. (Paris correspondence.)
20	(¹) Peytel, Henri (aged 6)	Poleymieux, Rhone	Dog	June 28	June 30	July 17	<i>Le Petit Lyonnais</i> , August.
21	A Young Man ...	Gatschina ...	Dog	...	...	Aug. 10	<i>Novos Vremya</i> , Russian Journal, August 11.
22	(¹) Bergeron Clédière (21 mos.)	Bordeaux ...	Dog	June 17	June 21	Aug. 17	<i>Daily News</i> , August 18. (Paris correspondence.)
23	Josefa Pinta Santiago ...	Ferrol, Spain ...	Dog	...	...	Aug. 16	<i>Le Matin</i> , Paris, August 18.
24	A young woman (aged 14) ...	Reus, Spain...	Dog	July 5	...	Aug. 20	Madrid correspondence, based on <i>La Epoca</i> .
25	Harry Collinge (aged 10) ...	Rawtenstall, Lancs.	Dog	July 6	July 15	Aug. 20	Manchester and London Journals, August 23.
26-8	Three Patients ...	Spain ...	Dog	...	...	Sept.	<i>Correspondancia</i> , Madrid, Sept.
29	(¹) Moulis Andre (6 years)	Paris ...	Dog	July 31	Aug. 6	Sept. 8	<i>Journal de Médecine de Paris</i> , November 7.
30	Zélie Leduc (70) ...	...	Dog	July 14	July 18	Sept. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
31	Louis Grand (41) ...	France ...	Dog	Sept. 5	Sept. 14	Oct. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
32	Duresset, Ed. ...	France ...	Dog	Aug.	Sept.	Sept.	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
33	(¹) Astier (2 years) ...	Paris ...	Dog	Aug. 4	Aug. 5	Sept. 16	<i>Journal de Médecine de Paris</i> , November 7.
34	Mathieu Videau (3 years)	Villeneuve-d'Ornon	Dog	Feb. 24	Feb. 27	Sept. 24	<i>Le Temps</i> , Paris, October 2.
35	(²) Moermann, a Gamekeeper	Sarthe ...	Dog	June 28	Aug. 11	Sept. 7	<i>Le Patriote</i> , Brussels, September 14.
36	(Name unknown) Bitten by a dog the property of Prince de Lucinge	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
37	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
38	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
39	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
40	(¹) Magneron Norbert (18)	Talence, Bordeaux	Dog	July 25	Aug. 1	Oct. 12	<i>La Science Libre</i> , Paris, October 24.
41	Amélie Ozimaska ...	Holbiele, Vladimir (Russia) ...	Dog	May	10th day	Feb., 1887	<i>Courrier de Varsovie</i> , February 17, 1887.
INOCULATED AT THE PASTEUR INSTITUTE, ODESSA.							
42	Miruelaff Panoff (14) ...	Odessa ...	...	...	...	Within four mths.	} <i>Novos Vremya</i> , September 14.
43	Tissenko (10) ...	Odessa ...	...	...	...	...
44	Jean Nowogiloff (12) ...	Odessa ...	...	...	...	...	} <i>Novos Vremya</i> , September 14.
45	(Name unknown) ...	Inhabitants of {	...	...	...	Within 4 mths.	
46	(Name unknown) ...	Kostroma {	...	...	...	...

(¹) Admitted by M. Pasteur or Dr. Chautemps. (*Journal de Médecine de Paris*, November 7.)

(²) Jamin, another man bitten by the same dog, but not inoculated, also died:—

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCU- LATION.	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1886:	1886
47	A Peasant, name unknown (64)	Odessa	Wolf	...	...	July 7	<i>La Semaine Médicale</i> (quoted in <i>Lancet</i> , August 21). <i>Journal de Médecine de Paris</i> , November 14.
48	Tyjneuh	Son Station-master, Lionbotinn	Dog	July 4	July 10	Aug 14	
49	Paul Potaikin (7)	Odessa	Dog	June 27	June 30	Aug 15	<i>Journal de Médecine de Paris</i> , October 17, and <i>Intransigent</i> , October 13.
50	Yassa Voropaïef (16)	Odessa	Dog	June 27	June 30	Aug 22	
51	Mirochwiehenko	Kharkoff	Dog	June 20	June 28	Aug. 3	<i>Daily News</i> , Odessa Correspondent, November 2. <i>Journal de Médecine de Paris</i> , November 7.
52	Ilyinski	Odessa	Dog	July 7	July 7	Aug. 20	
53	Bolodinn (Simon)	Gagarinn	Wolf	June	June	Oct. 12	<i>Novoï Vremya</i> and <i>Sciences Libres</i> , November 7. Dr. Kessler, St. Petersburg.
54	Kushejow (peasant)	Odessa ... ..	...	...	July 15	Oct. 12	
55	Anastasia Bretschkow	Odessa ... ..	...	...	{ 4 days after bite }	{ Oct. 14 }	Dr. Kessler, St. Petersburg.
56	Popow	Belgorod ... ..	...	...	
				1887:	1887:	1887:	1887:
57	Man (25)	Oster (Tscherni- gov)	Wolf	...	...	...	{ Submitted to the Intensive Treatment.— <i>Journal de Médecine de Paris</i> , August 28, 1887. <i>Daily News</i> , Aug. 30; from its Odessa Correspondent.
58	Child (10) ... ..		...	...	...	...
59	A Man (name unknown)	Caucasia	Wolf	...	...	Aug. 28	<i>Daily News</i> , August 30; from its Odessa Corres- pondent.
60	A Boy (name unknown)	Caucasia	Wolf	...	...	Aug. 28	
61	A Boy (name unknown)	Caucasia	Wolf	...	...	Aug. 28	<i>Daily News</i> , September 12; from its Odessa Corres- pondent.
62	— (name unknown)	Caucasia	Wolf	...	...	Sept.	
63	— (name unknown)	Caucasia	Wolf	...	...	Sept.	<i>Daily News</i> , September 12; from its Odessa Corres- pondent.
64	A Girl (12, name unknown)	Caucasia	Wolf	...	...	Sept.	
				1888:	1888:	1888:	1888:
65	Maxime Schilla	Sebastopol (near)	Dog	March	March	March	<i>Novoï Vremya</i> , March 27th. <i>La Paix</i> , Paris, July.
66	Nasar Ossatschenko	Odessa	Dog	...	...	July	
				1889:	1889:	1889:	1889:
67	Anton Monastersky	Kieff	Dog	May	May	May	<i>Odessa Zeitung</i> , June 2.
				1886:	1886:	1886:	
68	Arthur Stoboi (boy)	Lublin	Dog	July	August	Nov. 23	<i>Riga Tageblatt</i> , December 21, 1886. The dog lived and appeared to be perfectly healthy. Inoculated at St. Petersburg.— <i>Journal de Médecine de Paris</i> , March 18, 1887.
69	Wassilieff (peasant)	Jakhnov (Pekow)	Dog	...	...	...
				1887:	1887:	1887:	1887:
70	— (peasant, 28)	Pavlovo	Dog	Feb. 24	Mar. 4	Mar. 20	Dr. S. Warschawski, in <i>Russkaja Medisina</i> . This peasant died of paralytic rabies, contracted at laboratory.— <i>Journal de Médecine de Paris</i> , Oct. 23.
71	A Peasant (name unknown)	Kromy	Dog	July 25	July 26	Sept. 20	
72	A man (name unknown)	Circassia	Wolf	Aug. 1	Aug. 7	Sept.	<i>Journal de Médecine de Paris</i> , October 23.
73	A Child (name unknown)	Circassia	Wolf	Aug. 1	...	Sept.	
74	A Child (name unknown)	Circassia	Wolf	Aug. 1	...	Sept.	
				1889:	1889:	1889:	1889:
75	(¹) W—, Helen (6)	Biela (Sjediz)	Dog	July 15	July 15	Aug. 9	Dr. Rodkewitsch, in <i>Russkaja Medicina</i> , September.
				1886:	1886:	1886:	1886:
76	Joseph Goffi, alias Smith (26)	Brown Institution, London	Cat	Sept. 4	Sept. 6	Oct. 20	"His death was due to the virus of rabies."— <i>Report of Committee to Local Gov. Board</i> , 1887, p. vi. <i>Journal de Médecine de Paris</i> , March 13 (1887). Died at the Tenon Hospital, Paris. <i>Le Science Libre</i> , Paris, November 14. <i>Rotherham Advertiser</i> , November 6. Professor Peter (<i>Lancet</i> , January 15, 1887). <i>Journal de Médecine de Paris</i> , December 5, 1886.
77	Rovati, Luigi (30)	Modena	Dog	Sep. 12	Sep. 20	Oct. 23	
78	(²) Clergeot-Moulin (27)	Paris	Dog	Aug. 7	Aug. 11	Oct. 24	Professor Peter (Letter to, from Dr. Pitoy). <i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887. <i>Journal de Médecine de Paris</i> , January 2, 1887.
79	Edward, cabman (34)	Versailles	Dog	...	...	Oct. 30	
80	(³) Wilde, Arthur	Rotherham	Man	...	...	Nov. 3	Professor Peter (<i>Lancet</i> , January 15, 1887). <i>Journal de Médecine de Paris</i> , December 5, 1886.
81	Sodini, B. (46)	Constantine	Dog	Oct. 12	Oct. 21	Nov. 24	
82	Bouyer, Arthur (12)	58, Rue de Bre- tagne, Paris	Dog	Oct. 20	Oct. 21	Nov. 26	Professor Peter (Letter to, from Dr. Pitoy). <i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887. <i>Journal de Médecine de Paris</i> , January 2, 1887.
83	Letang, père	Gourgeon	Dog	Nov. 3	Nov. 8	Dec. 8	
84	Réveillac, Louis (20)	France	Dog	Nov. 4	Nov. 6	Dec. 21	Professor Peter (<i>Lancet</i> , January 15). Professor Peter (Letter to, from Medical Attendant). Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30. Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
85	(⁴) Née, Leopold (42)	Arras	Dog	Nov. 12	Nov. 17	Dec. 17	
						1887:	1887:
86	Jansen, Louis Victor (47)	Dunkirk	Dog	Aug. 19	Aug. 21	Jan. 1	Professor Peter (<i>Lancet</i> , January 15). Professor Peter (Letter to, from Medical Attendant). Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30. Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
87	Gérard, Amédée (28)	Boran (Oise)	Dog	Dec. 1	Dec. 3	Jan. 3	
88	Goriot, Paul (14)	Paris	Cat	Nov. 30	Dec. 21	Jan. 15	Professor Peter (<i>Lancet</i> , January 15). Professor Peter (Letter to, from Medical Attendant). Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30. Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
89	Albert (woman)	Vallouise (Basses Alpes)	Dog	Dec. 20	Dec. 25	Jan. 5	

[NOTE.—The intensive method is abandoned about May or June, 1887.]

(¹) Other children bitten by the same dog, and not inoculated, survive; the dog disappeared. (²) Admitted by M. Pasteur or Dr. Chautemps. (³) Dr. J. H. Clarke's Opinion on Facts as reported: Death not due to hydrophobia, but probably to Pasteur's inoculations, the symptoms not being those of any known disease. (⁴) The dog in this case was pronounced not to have been mad.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886 :	1886 :	1887 :	1887 :
90	Fonlup (30)	Tour du Pin (Isère)	Dog	Dec. 1	Dec. 12	Jan. 24	<i>Journal de Médecine de Paris</i> , February 6.
91	Bergé (40)	Bordeaux	Dog	July {	3 days after bite.	{ Jan. 30	Dr. Pitres made the autopsy and declared that the man died of hydrophobia. <i>Journal de Médecine de Paris</i> , February 6.
92	Alphand (woman, 42)	Madeleine (Paris)	Dog	Dec. 13	Dec. 20	Jan. 30	<i>Journal de Médecine de Paris</i> , March 13.
93	Saintes (child)	Maison-Carrée, near Alger	Dog	...	...	Feb. 24	<i>Journal de Médecine de Paris</i> , March 13.
94	Chavagnac, Louise (13)	Arbe	Dog	Oct.	Oct.	Mar. 10	<i>Journal de Médecine de Paris</i> , March 20 and July 31.
				1887 :	1887 :		
95	Sans Ramon	La Siréna, Badajoz, Spain	Wolf	Feb. 15	Mar. 15	Mar. 20	Dr. Dujardin-Beaumetz. [Died under treatment.]
96	(¹) Ballasteros	La Puerta, Prov. of Jena, Spain	Dog	Feb. 9	Feb. 20	Mar. 24	} <i>El Resumen</i> , a Spanish journal, quoted in <i>Journ. de Médecine de Paris</i> , April 24.
97	A person (no name given)	Navas de San Juan (Jena), Spain	Dog	...	...	Mar. 26	
98	(¹) A woman (41)	Baeza, Spain	Dog	...	...	Apr. 23	
99	Ph. Hydram (56)	Sallèle, France	Dog	Oct. 5	Oct. 10	Apr. 17	<i>Lancet</i> , June 4, Paris Correspondence.
100	J. Hayden (8)	Thurles, Ireland	Dog	Apr. 16	Apr. 19	May 19	<i>Lancet</i> , June 4, and <i>Freeman's Journal</i> , Dublin, May 27
101	(²) Doneraile, Lord (69)	Doneraile Court, co. Cork, Ireland	Fox	Jan. 14	Jan. 26	Aug. 26	<i>Times</i> , August 27. <i>Journal de Médecine de Paris</i> , September 4.
102	Pénichaud (18)	Poulaines (Indre), France	Dog	June 12	June 14	Aug. 19	Dr. Bretheau (Valençay, Indre), in <i>Journal de Médecine de Paris</i> , September 4.
103	Valentin, Emile (16)	Reherrey (France)	Dog	Feb. 22	Feb. 28	July 27	<i>Progrès de l'Est</i> , quoted in <i>Journal de Médecine de Paris</i> , September 11.
Under the Third Formula.							
104	Hurot, Paul (42)	Rue St. Bernard, Paris	Dog	May 29	May 30	July 4	<i>Figaro</i> , Paris, July 5.
105	Gachet, Jean Baptiste (25)	Vierson (Cher)	Dog	Apr. 4	Apr. 10	May 2	Dr. Lutaud, Editor <i>Journal de Médecine de Paris</i> .
106	Bourgeot, Jules	Audigny (Aisne)	Dog	Apr. 24	Apr. 28	July 11	Dr. Peter's Speech, Academy of Medicine, July 12.
107	Desclide (aubergiste)	Larochevoucauld (Charente)	Dog	May 22	May 23	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by Dr. Nadaud.)
108	Jenle, Jeanne M. (57)	Arcezac (Hautes-Pyrénées)	Dog	Mar. 27	Mar. 29	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by M. Courrèges.)
109	Cahill, Martin (29)	Templemore, Ireland	Dog	June 14	June 27	Aug. 14	<i>Standard</i> (and other London papers), August 18.
110	Kirkham, Albert E. (5)	Lancaster	Dog	July 18	July 26	Aug. 27	<i>Daily Telegraph</i> , August 30. <i>Lancet</i> , June 16, 1888.
111	Cagarelli, Anna	Fiorano, Province of Modena	Dog	June 13	June 20	Sept. 12	<i>Roma</i> , Neapolitan newspaper, Sept. 17 (confirmed by letter from the Syndio of Fiorano, October 5).
112	(Name unknown)	Portugal	Wolf	...	...	} About Sept. 20	<i>Daily Chronicle</i> , London, September 23; from its Paris Correspondent. [The patients were treated in Paris.]
113	(Name unknown)	Portugal	Wolf	...	...
114	(Name unknown)	Portugal	Wolf	...	...	} Sept. 21	<i>Weekly Dispatch</i> , September 25; <i>Tablet</i> , October 8.
115	Padre Luis	Cabanos, Portugal	Wolf	July 5	Aug. 2		
116	(Name unknown)	Portugal	Wolf	...	...	...	} The <i>Commercio Portugues</i> , quoted in <i>Journal de Médecine de Paris</i> , October 23.
117	(Name unknown)	Portugal	Wolf	...	...	...
118	(Name unknown)	Portugal	Wolf	...	...	...
119	(Name unknown)	Portugal	Wolf	...	...	...
120	Jammot (woman, 38)	La Garenne	Cat	Aug. 3	Aug. 4	Sept. 24	Dr. Hallade, in <i>Journal de Médecine de Paris</i> , Oct. 2.
121	(⁴) Lindley, Fred. (26)	Cumberworth, Huddersfield	Dog	Aug. 1	Aug. 6	Oct. 4	<i>Manchester Guardian</i> , October 5; also, <i>British Medical Journal</i> , October 15.
122	Saulat, Georgette (5 years)	35, Rue de Chaux-fourniers, Paris	Dog	July 9	July 9	Aug. 4	<i>Journal de Médecine de Paris</i> , October 23.
123	Marchois (8 years)	Senlis	Dog	July 3	July 5	Aug. 16	<i>Journal de Médecine de Paris</i> , October 23.
124	Pliego, Joseph	Portugal ... ..	...	July	Aug.	Aug. 30	<i>Journal de Médecine de Paris</i> , October 23.
125	Palu, Eugénie (8)	Codalat, France	Dog	Sept. 1	Sept. 6	Oct. 10	<i>Journal de Médecine de Paris</i> , November 6.
126	Thierry, Paul (4)	Melleville, France	Dog	Sept. 1	Sept. 7	Oct. 15	<i>Journal de Médecine de Paris</i> , November 6.
127	Sintés, Edward (child)	Hussein-Dey (Algeria)	Dog	Jan. 19	Jan. 25	Oct. 17	<i>Intransigent</i> , Paris, Nov. 21. [Inoculated in Paris.]
128	Cauvy, Dr.	Béziers, France	Dog	Sept. 30	Oct.	Nov. 3	<i>Journal de Médecine de Paris</i> , November 13.
129	(³) Vial, Rose (70)	Arles, France	Dog	Aug. 29	Sept. 5	Oct. 3	<i>Journal de Médecine de Paris</i> , December 11.
130	Valla	Salettes	Dog	Nov. 8	Nov. 13	Dec. 20	<i>Semaine Médicale</i> , February 1, 1888.
						1888 :	1888 :
131	Boy (4 yrs., name unknown)	Paris	Dog	Dec. 6	Dec. 12	Jan. 22	<i>Medical Press</i> , London, March 21.
132	Woman (52, name unknown)	Paris	Dog	Jan. 23	Jan. 29	Feb. 17	<i>Medical Press</i> , London, March 21.
133	Sidi-ben-Isral	Algeria	Dog	...	...	Mar. 18	<i>Echo</i> , London, March 19. (Death occurred at the Cochin Hospital.)
134	Marinot, Alphonse (soldier)	Paris	Dog	Feb. 15	Feb. 15	Apr. 1	<i>Journal de Médecine de Paris</i> , April 22.
135	S— (54, farrier)	Paris	Dog	Nov. 9	Nov. 11	Apr. 3	<i>Journal de Médecine de Paris</i> , April 22.
136	Denis, Cotte (28)	Thiers (Puy-de-Dôme)	Dog	...	Mar. 6	Apr. 12	<i>Moniteur du Puy de Dôme</i> , April 12.
137	Child (6½ years)	Paris ... Dôme)	Dog	April	April	April	Dr. Dujardin-Beaumetz.— <i>Le Temps</i> , Paris, May 4.
138	Poulet, M. (20)	Pecq, near Paris	Dog	Dec. 6	Dec. 8	May 16	<i>La Paix</i> , Paris, July.
				1888 :	1888 :		
139	Avray, Paul (11)	Boisguillaume (Rouen)	Dog	Apr. 12	Apr. 17	May 29	<i>Le Petit Journal</i> , Paris, May 31.

(¹) Each died four days after the return from Paris.—(*Journal de Médecine de Paris*, January 2, 1887.) (²) M. Pasteur has stated that Lord Doneraile was not treated under the intensive method. (³) No clinical or experimental proof that the animal was affected with rabies has been produced.—*Journal de Médecine de Paris*, December 11, 1887. (⁴) See No. 238; the two Lindleys were brothers, and inoculated together.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCU- LATION.	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1888:	1888:	1888:	1888:
140	Olin, Eugene ...	Rue Curial, Paris	Dog	Apr. 23	Apr. 26	June 17	<i>Annales de l'Institut Pasteur</i> , Paris, July 25.
141	(¹) Bertin (child, 18 months)	Gentilly ...	Dog	May 15	May 17	June 20	<i>L'Intransigeant</i> , Paris, September 10.
142	Villemain, P. (31 months)	Marseilles ...	Dog	May 9	May 14	June 28	<i>Lancet</i> (Paris correspondence), September 15.
143	Labeaume (37, labourer) ...	Châtenay ...	Cat	May 29	May 30	July 6	<i>Lancet</i> (Paris correspondence), September 15.
144	A man (name unknown, 28)	France ...	Dog	Dec. '87	Dec. '87	July 1	<i>Medical Press</i> , July 11.
145	Ducos, Mathieu (28) ...	St. Jean de Bonne- fond (Loire) ...	Cat	June 16	June 20	July 18	<i>L'Intransigeant</i> , Paris, September 10.
				1886:	1886:		
146	Sinardet, Alphonse (26) ...	Polliot (Ain) ...	Dog	April 26	May 3	July 28	<i>Annales de l'Institut Pasteur</i> , September 25.
				1888:	1888:		
147	Mesnil, L. (44) ...	Châtenay ...	Cat	Mar. 25	Mar. 26	July 30	<i>L'Intransigeant</i> , Paris, September 10.
148	Sarasin, M ^{me} . (44) ...	St. Maurice, Swit- zerland ...	Dog	July 1	July 4	Aug. 4	<i>L'Intransigeant</i> , Paris, September 10.
149	Guers, Joseph (27) ...	Chelles (Seine-et- Marne) ...	Dog	July 13	July 16	Aug. 8	<i>L'Intransigeant</i> , Paris, September 10.
150	N — (name unknown) ...	... ..	Dog	July 15	July 16	Aug. 20	Dr. Levraud (<i>Journal de Médecine de Paris</i> , Nov. 18).
151	Couzinier, Jean (65) ...	Courbevoie (Seine)	Dog	Sept. 12	Sept. 12	Oct. 14	<i>Annales de l'Institut Pasteur</i> , October 25.
152	Bourelly, Leon (14) ...	Marseilles ...	Dog	May 27	June 7	Nov. 2	<i>Annales de l'Institut Pasteur</i> , November 25.
153	Child (name unknown) ...	Rio de Janeiro ...	Dog	...	...	28rd day	<i>Medical Press</i> , December 26.
						1889:	1889:
154	(²) Mayland, Rose (3) ...	Belbeuf (Seine- Inférieure) ...	Dog	Dec. 13	Dec. 15	Jan. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
155	X — (19) ...	Peyrestortes (Py- rénées-Orientales)	Dog	Dec. 8	Dec. 9	Jan. 9	<i>Journal de Médecine de Paris</i> , February 17.
156	(²) Allègre, Louis (14) ...	Cambes (Gironde)	Dog	Dec. 25	Dec. 28	Jan. 14	<i>Annales de l'Institut Pasteur</i> , January 25.
157	Druant, Blanche (16) ...	Lariboisière, Paris	Dog	Dec. 25	Dec. 26	Feb. 8	<i>Journal de Médecine de Paris</i> , February 24.
				1889:	1889:		
158	Druaux, B. (15) ...	Aubervilliers ...	Dog	Jan. 7	Jan. 9	Feb. 11	<i>Lancet</i> , March 16.
				1888:	1888:		
159	J. L. Dufour (72) ...	Veyras ...	Dog	Dec. 23	Dec. 25	Feb. 13	<i>Lancet</i> , March 16.
				1889:	1889:		
160	Arenés, Gilles (50) ...	Soler (Pyrénées- Orientales) ...	Dog	Jan. 26	Jan. 29	Feb. 24	<i>Annales de l'Institut Pasteur</i> , March 25
				1888:	1888:		
161	Rey, Ernest ...	Oissel ...	Dog	Dec. 13	Dec. 17	Mar. 4	<i>Lancet</i> , March 23.
				1889:	1889:		
162	An Italian Child ...	Cairo ...	Dog	Feb. 4	Feb. 9	Mar. 5	<i>British Medical Journal</i> , May 11. [Treated at Naples.]
163	Mahout, Ed. (8) ...	Levallois - Perret (Seine) ...	Dog	Jan 31	Feb. 3	Mar. 9	<i>Annales de l'Institut Pasteur</i> , March 25.
164	(²) Rascol, Pierre (52) ...	Murat (Tarn) ..	Dog	Feb. 28	Mar. 9	Apr. 14	<i>Journal de Médecine de Paris</i> , October 13.
				1887:	1887:		
165	Moens, Henri (24) ...	Anvers (Belgium)	Dog	Mar. 2	Mar. 7	May 17	<i>Annales de l'Institut Pasteur</i> , June 25.
		[du-Nord)		1889:	1889:		
166	Maillot, M ^{me} . (86) ...	Coatascorn (Cotes- de-Doune) ...	Dog	April 27	May 3	June 2	<i>Annales de l'Institut Pasteur</i> , June 25.
167	Waleley, Patrick (7) ...	Newry, Ireland ...	Dog	May 3	May 20	June 13	<i>Annales de l'Institut Pasteur</i> , July 25.
168	(²) Coudurier, Gustave (7)	Noyarey, Grenoble	Dog	June 9	June 15	June 24	<i>Ibid.</i>
169	A Child (name unknown) ...	Milan ...	Dog	May	May	June	} <i>Journal de Médecine de Paris</i> , June 30. [This and the four preceding cases were treated at the Institute of Dr. Bareggi, of Milan.]
170	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
171	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
172	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
173	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
174	Valli, Romeo (11) ...	Milan ...	Dog	May 30	May 31	June 27	} Treated by Dr. Bara- tieri.
175	Bulli, G. (child) ...	Milan ...	Dog	May 30	May 31	June 28	
176	Lurashi, Rosa (14) ...	... ..	Dog	June 10	June 11	June 28	
177	Trottet, G. (13) ...	Paris ...	Dog	May 23	May 25	July 14	<i>Journal de Médecine de Paris</i> , July 28.
178	Gilbert, Prosper (11) ...	Brussels ...	Dog	June 18	June 24	Aug. 1	<i>Annales de l'Institut Pasteur</i> , August 25.
179	Claudel, M. ...	Nancy, France ...	Dog	July 8	July 19	Aug. 6	<i>Journal de Médecine de Paris</i> , October 6.
180	Sottiaux, J. B. (54) ...	Bougival (Seine-et- Oise) ...	Dog	July 5	July 5	Aug. 13	<i>Annales de l'Institut Pasteur</i> , August 25.
				1889:	1889:		
181	Manuel, José (6) ...	Asteazu (Spain) ...	Dog	June 30	July 9	Aug. 29	<i>Annales de l'Institut Pasteur</i> , October 25.
182	Auroux, Gilbert ...	Néris-les-Bains ...	Dog	July 7	July 9	Aug. 19	M. Boissier, <i>Journal de Médecine de Paris</i> , Aug. 25.
183	Yorke, Claude James (7) ...	Ch. Fenton, Yorks.	Dog	Aug. 5	Aug. 9	Aug. 31	<i>Yorkshire Post</i> , September 5.
184	Bia, Albert (boy) ...	Sala Braganza ...	Dog	Nov. 4	Nov. 5	Nov. 24	<i>Secolo</i> , Milan, November 25.
185	Monastirska, A. (6) ...	Charkow, Russia ...	Dog	Jan. 27	Jan. 29	Feb. 28	} 1890: Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
186	Malikyna, Acouline (17) ...	Charkow, Russia ...	Dog	Aug. 23	July 1	July 24	
187	Garbounoff, Matrena (50)	Charkow, Russia ...	Dog	Aug. 12	Sept. 5	Oct. 9	
188	Mesenzoff, Pierre (42) ...	Charkow, Russia ...	Wolf	Apr. 1	Apr. 3	Oct. 10	
189	Aleksandroff, F. (40) ...	Charkow, Russia ...	Wolf	Sep. 14	Oct. 4	Oct. 23	

(¹) This and the seven following cases (except 144) are admitted by M. Pasteur, and the details have been revised from the official "Annals" of his Institute. (²) Died while still under treatment. (³) Another man bitten by the same dog lived, and Prof. Peter, of Paris, stated that Rascol died of *rage du laboratoire* or Pasteur's rabies.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1889 :	1889 :	1889 :	1890 :
190	Alferenkoff, F. (28) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Oct. 25	Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
191	Bratelski, Tikon ...	Charkow, Russia...	Wolf	Oct. 13	Oct. 18	Nov. 6	
192	Plotnikoff, L. (55) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Nov. 10	
193	Sawelieff, W. (27) ...	Charkow, Russia...	Dog	June 11	June 13	Dec. 25	
194	T—, Alice (8) ...	Paris ...	Dog	Nov. 16	Nov. 19	Feb. 9	<i>Journal de Médecine de Paris</i> , February 16.—Report of Dr. Potin.
195	Paris, Louis (10) ...	Preuilly (Indre-et-Loire) ...	Dog	Jan. 14	Jan. 17	Feb. 18	Dr. Durand in <i>Annales de l'Institut Pasteur</i> , April 25.
196	Rankin, Joseph (13) ...	Coleraine, Ireland	Dog	Jan. 29	Feb. 2	Mar. 10	<i>Times</i> , London, March 13. [Pasteur, April 25.
197	Olivier, Florian (43) ...	Templeuve (Nord)	Dog	Jan. 27	Feb. 3	Mar. 15	Dr. Tison reported the case to <i>Annales de l'Institut Pasteur</i> , April 25. [Died while
198	Gerday, Louis (10½) ...	St. Georges (Belgium)	Dog	Mar.	Mar. 23	Mar. 31	under treatment.] <i>Annales de l'Institut Pasteur</i> , May 25.
199	Grant, Justin (52) ...	Birac (Lot-et-Garonne) ...	Dog	Mar. 23	Mar. 31	May 4	<i>Annales de l'Institut Pasteur</i> , August 25.
200	Dubois, Josephine (70) ...	Locquignol (Nord)	Dog	June 15	June 17	July 14	Dr. Gaumeton reported the case to <i>Annales de l'Institut Pasteur</i> , August 25.
201	Dégéan, Albert (31) ...	Ste. Livrade (Lot-et-Garonne) ...	Dog	June 3	June 7	Aug. 6	<i>Annales de l'Institut Pasteur</i> , August 25.
202	Casali, Bianca (7) ...	Copparo, near Ferrara, Italy ...	Dog	Aug.	Aug.	Aug. 29	<i>Roma</i> (Italian Journal), September 3. [Treated at Bologna.]
203	Baudino, Thérèse (13) ...	Bocca, nr. Cannes	Cat	July 30	Aug. 4	Sept. 4	<i>Annales Pasteur</i> , November 25.
204	Martin, Jules (7) ...	Cannes ...	Dog	July 18	July 19	Sep. 16	<i>Journal de Médecine de Paris</i> , September 21.
205	Vidalon, Sébastien (46) ...	Ille-sur-Tet, nr. Perpignan	Dog	Sep. 6	Sep. 10	Oct. 2	<i>Galignani's Messenger</i> , October 8, 1890.
206	Domenech, Jean (boy) ...	Ille-sur-Tet, nr. Perpignan	Dog	Sep. 6	Sep. 10	Oct. 3	<i>Galignani's Messenger</i> , October 8, 1890.
207	Fournés, Joseph (14) ...	Guyotville, Algeria	Dog	Aug. 1	Aug. 8	Oct. 14	<i>Annales Pasteur</i> , November 25.
208	(¹) Groussous, Jean (52) ...	Fedj-M'zala (Constantine) ...	Dog	Oct. 13	Oct. 22	Nov. 10	<i>Annales Pasteur</i> , November 25.
209	Birebent, Jules (24) ...	Pamiers, Ariège ...	Dog	Oct. 10	Oct. 14	Dec. 1	1891 : Dr. Allana, <i>Annales de l'Institut Pasteur</i> , January 25.
210	Brousse, Raymond (24) ...	Toulonne (Gironde)	Dog	Aug. 16	Aug. 20	Jan. 15	1891 : <i>L'Indépendant des Basses Pyrénées</i> , January 22.
211	Terles, Barthélemy (59) ...	Sainte-Sixte (Lot-et-Garonne) ...	Dog	Jan. 1	Jan. 5	Feb. 8	1891 : <i>Annales de l'Institut Pasteur</i> , March 25.
212	Binet, Auguste (75) ...	Méaulte (Somme)	Dog	Dec. 5	Dec. 13	April 15	1890 : <i>Annales de l'Institut Pasteur</i> , May 25.
213	Frouin, Gaston (16) ...	Cubzac - les - Ponts (Gironde)	Dog	Apr. 27	May 3	June 1	1891 : <i>Annales de l'Institut Pasteur</i> , June 25.
214	(¹) Fridy, Mohammed D. (25)	Sfax (Tunis) ...	Dog	May 2	May 22	June 12	1891 : <i>Annales de l'Institut Pasteur</i> , June 25
215	(*) Juda, Isaac (28) ...	Salonica, Turkey	Dog	May 25	June 3	July 11	1889 : <i>Annales de l'Institut Pasteur</i> , September 25.
216	Milet, Henri (11) ...	Montrenil - sous - Bois (Seine) ...	Dog	June 18	June 23	July 20	1891 : <i>Annales de l'Institut Pasteur</i> , August 25.
217	Pélofi, Baptiste (21) ...	Jaurac (Aude) ...	Dog	Feb. 7	Feb. 14	Aug. 8	<i>Annales de l'Institut Pasteur</i> , September 25.
218	Varney, Henry (boy) ...	New York ...	Dog	...	...	Aug. 14	<i>Birmingham Daily Post</i> , August 15.
219	(¹) Sommier, Joseph (6) ...	Joudes Sâone - et - Loire	Dog	Aug. 12	Aug. 16	Sep. 2	<i>Annales de l'Institut Pasteur</i> , September 25.
220	Roig, Juan (13) ...	Puebla de Tiana (Spain) ...	Dog	Sep. 7	Sep. 12	Oct. 12	<i>Annales de l'Institut Pasteur</i> , November 25.
221	Morton, Robert D. (young man) ...	Columbia, S. Carolina, U.S.A. ...	Dog	Aug. 6	Aug. 7	Oct. 25	Treated at New York.— <i>Boston Post</i> , October 26. [of Lyons.
222	Carry, Louis (13) ...	Lyons ...	Dog	Sep. 11	Sep. 24	Oct. 29	Reported to Pasteur's <i>Annales</i> , (Nov. 25) by Dr. Roux
223	Bommelle, Xavier (54) ...	Remy (Oise) ...	Dog	Oct. 17	Oct. 20	Nov. 12	<i>Annales de l'Institut Pasteur</i> , December 25.
224	Bolinhas, José (4) ...	Crato (Portugal)...	Dog	Nov. 3	Nov. 13	Dec. 7	<i>Annales de l'Institut Pasteur</i> , December 25.
225	Lacombe, Ernest (30) ...	Palestro (Algeria)	Dog	Mar. 17	Mar. 25	Dec. 25	1892 : <i>Annales de l'Institut Pasteur</i> , February 25.
226	Beale, George (boy) ...	Kilkenny (Ireland)	Dog	Nov.	Nov.	Jan. 4	1892 : <i>Weekly Irish Times</i> , Dublin, January 2.
227	Hayden (9) ...	Carlow (Ireland)	Dog	May	May	Feb. 4	<i>Times</i> , February 5.
228	Drouet, Georgette (6) ...	D'Issy (Seine) ...	Dog	Feb. 7	Feb. 25	Mar. 11	1892 : <i>Annales de l'Institut Pasteur</i> , March 25.
229	Santhoux, Eugène (labourer)	Gex (Ain) ...	Dog	Feb. 9	Feb. 14	April 2	<i>Annales de l'Institut Pasteur</i> , April 25.
230	Pimentade Castro, B. P. (15)	Vianna de Castelo (Portugal)	Cat	Mar. 2	Mar. 8	April 9	<i>Annales de l'Institut Pasteur</i> , May 25.

(¹) Died while still under treatment. (*) A remarkable case. The patient a doctor, went to Paris for treatment, and died of hydrophobia two years and two months afterwards.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1892:	1892:	1892:	1892:
231	Micoïn, Augustin (18) ...	Versailles ...	Cat	Mar. 15	Mar. 17	April 11	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
232	Ferudja, François (12) ...	Guelma, Algeria...	Dog	Apr. 5	Apr. 12	April 26	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
233	Labelle, Pierre (72)	Labèze	Dog	Apr. 9	Apr. 15	May 7	<i>Annales de l'Institut Pasteur</i> , June 25.
234	Segura, Sébastien (47)	Oran	Dog	Apr. 14	Apr. 24	May 15	<i>Annales de l'Institut Pasteur</i> , June 25.
235	Mathias, Thomas (48) ...	Norvao, Portugal	Dog	June 15	June 30	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
				1891:	1891:		
236	Ruffini, Pietro (32) ...	Rocca di Papa, Italy	Dog	Oct. 23	Oct.	Aug. 27	Died at Rome. Case reported in Italian journals.
				1892:	1892:		
237	Desvignes, Gustave (39) ...	Avenue de Breteuil, Paris ...	Dog	July 23	July 26	Aug. 29	<i>L'Etoile Belge</i> , Brussels, September 3.
				1887:	1887:		
238	(¹) Lindley, Herbert (17)...	Cumberworth, Huddersfield	Dog	Aug. 1	Aug. 6	Sept. 7	<i>Huddersfield Daily Chronicle</i> , September 8.
		[land]		1890:	1890:		
239	Van Faassen (9) ...	Bennebroek (Hol-)	Dog	June 4	June 18	Oct. 15	<i>Annales de l'Institut Pasteur</i> , December 25.
				1892:	1892:		
240	Gernez, Achille (4½) ...	Beaumont-les-Cambrai (Pas-de-Calais)	Dog	Oct. 25	Oct. 28	Nov. 18	<i>Annales de l'Institut Pasteur</i> , December 25.
							1893:
241	Schirch, Louis (32) ...	Dijelli (Algeria)	Dog	Aug. 22	Aug. 28	Oct. 24	<i>Annales de l'Institut Pasteur</i> , January 25.
242	Scherr, Emile (35) ...	Oran ...	Dog	Oct. 9	Oct. 16	Dec. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
243	D'Almeida, José J. (10) ...	d'Aveiro (Portugal)	Dog	Nov. 28	Dec. 7	Dec. 30	<i>L'Eclair</i> and other Paris Journals.
244-9	Six Persons ...	Moscow ...	in	the	year	1892	Dr. Goldenbach, <i>Pasteur's Annales</i> , September 25.
							1893:
250	(²) Guillon, Augustine (17)	Voiron (Isère) ...	Dog	Dec. 13	Dec. 16	Jan. 4	<i>Annales de l'Institut Pasteur</i> , January 25.
251	Duvivier, Charles (32) ...	51, rue Menilmontant, Paris ...	Dog	Oct. 18	Oct. 20	Jan. 7	<i>The Morning</i> (Paris news), January 7, and <i>Pasteur's Annales</i> , February 25.
				1893:	1893:		
252	Chetal, Antoine (26) ...	Aix-les-Bains ...	Dog	May 3	May 4	June 1	<i>Annales de l'Institut Pasteur</i> , July 25.
253	Chastaing, Léon (28) ...	Paris ...	Dog	May 12	May 15	June 25	<i>Annales de l'Institut Pasteur</i> , July 25.
254	Morel, Auguste (18) ...	Rue Portalis, Paris	Dog	May 30	May 30	Aug. 5	<i>Annales de l'Institut Pasteur</i> , September 25.
255	Mermont, Melchior ...	Bonneville ...	Dog	July 14	July 18	Aug. 6	<i>Annales de l'Institut Pasteur</i> , August 25.
256	Fages, Alfred (40) ...	Alais (Gard) ...	Cat	July 12	July 14	Aug. 20	<i>Le Gaulois</i> , Paris, August 22, and <i>Pasteur's Annales</i> .
257	Montessuy, J. M. (57) ...	St. Pierre-de-Rumilly (H. Savoie)	Dog	July 14	July 18	Aug. 23	<i>Annales de l'Institut Pasteur</i> , October 25. [Oct. 25.]
							1894:
258	Ollero, Nemesio (52) ...	Debicho, Cordova, Spain ...	Dog	Dec. 15	Dec. 26	Jan. 5	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
259	F. Carbonnell (53) ...	Pozzo-Blanco, Cordova ...	Dog	Dec. 18	Jan. 5	Jan. 26	<i>Annales de l'Institut Pasteur</i> , May 25.
		[tine]					1893:
260	Robert, Joseph (8) ...	Bougie (Constantinople)	Dog	Oct. 4	Oct. 10	Feb. 16	<i>Annales de l'Institut Pasteur</i> , April 25.
261	A douanier... ...	Souk-Ahras (Algeria) ...	Dog	Dec.	Dec.	Mar.	<i>Journal de Médecine de Paris</i> , March 18.
262	Fournès, Auguste ...	Chérakas (Algeria)	Dog	Aug. 1	Aug.	Mar. 12	<i>Journal de Médecine de Paris</i> , March 18.
							1894:
263	Pialut, Huberte (56) ...	Neuilly ...	Dog	Dec. 31	Jan. 3	April 10	<i>Annales de l'Institut Pasteur</i> , July 25.
				1894:			
264	Oakes, Enoch (child) ...	Shawforth, Rochdale ...	Dog	May 31	June 5	June 25	<i>Manchester Courier</i> , July 23.
265	Desquincourt, M ^{me} . (43)	Liévin (Pas-de-Calais) ...	Dog	Feb. 16	Feb. 18	July 12	<i>La Croix</i> , Paris, July 20.
266	(³) Stevenson, Malcolm (25)	Birkenhead ...	Dog	June 10	July 1	Aug. 8	<i>Birkenhead News</i> , August 11.
267	Delepine, boy (15) ...	St. Denis-des-Monts (Amfreville) ...	Dog	June 16	June 17	Aug. 12	<i>L'Industriel Elbeuven</i> , August 15.
							1895:
268	Saussol, Louise (33) ...	Cessenon (Hérault)	Dog	July 5	July 10	Aug. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
269	Vayre, Louis (5) ...	Bize (Aude) ...	Dog	June 29	July 8	Sept. 1	<i>Annales de l'Institut Pasteur</i> , November 25.
							1895:
270	Meynadier, Achille (39) ...	Sidi-bel-Abbès (Algeria) ...	Dog	Aug. 11	Aug. 19	Oct. 12	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
271	Richaud, Joseph (4) ...	Beaussemlant (Drôme) ...	Dog	Oct. 4	Oct. 7	Nov. 6	<i>Annales de l'Institut Pasteur</i> , November 25.

(¹) See No. 121; the two Lindleys were brothers, and were inoculated together. (²) Died while still under treatment. (³) Lieut. Stevenson, of the 93rd Highlanders, was bitten at Dalhousie, Punjab, India, where his regiment was stationed, and died of paralytic rabies at Birkenhead.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA
			BY	ON			
272	Bentley, James (18) ...	Clayton-le-Moors, Lancashire ...	Dog	1894 : Oct. 18	1894 : Oct. 23	1894 : Nov. 10	1894 : <i>Annales de l'Institut Pasteur</i> , November 25.
273	Prévost, Joseph (58) ...	Issy (Seine) ...	Dog	1895 : July 30	1895 : Aug. 4	1895 : Nov. 22	1895 : <i>Journal de Médecine de Paris</i> , March 10th, and <i>Annales de l'Institut Pasteur</i> , May 25.
274	Barry, Séverin (62) ...	Vattetot-sur-Mer (Seine-Inférieure) ...	Dog	1895 : Dec. 7	1895 : Dec. 12	1895 : Jan. 15	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
275	Rio, Julien Marie (7) ...	Missillac (Loire-Inférieure) ...	Dog	1895 : Dec. 20	1895 : Dec. 23	1895 : Jan. 22	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
276	Garrigues, Elisabeth (29) ...	Castelsarrazin (Tarn-et-Garonne) ...	Cat	1895 : Jan. 15	1895 : Jan. 18	1895 : Feb. 14	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
277	Stewart, Robertson (38) ...	Glasgow ...	Dog	1895 : Mar. 8	1895 : Mar. 11	1895 : Apl. 1	1895 : <i>North British Daily Mail</i> , April 2nd.
278	(¹) Blutel, Isidore (27) ...	St. Georges-d'Ambery (Orne) ...	Dog	1895 : Apl. 22	1895 : Apl. 28	1895 : May 14	1895 : <i>Annales de l'Institut Pasteur</i> , November 25.
279	Kelly, James (6) ...	Belfast ...	Dog	1895 : Apl. 18	1895 : Apl. 23	1895 : June 25	1895 : <i>Irish News</i> , Belfast, June 27, and <i>Pasteur's Annales</i> , November 25.
280	(⁴) Walton, B. A. ...	Houston County, Ga., U.S.A. ...	Dog	1895 : May 19	1895 : May	1895 : June 30	1895 : <i>The Dog Question</i> , Dobbs Ferry, N.Y., August.
281	Howard, Benjamin (14) ...	Hyde, Cheshire ...	Dog	1894 : Nov. 14	1894 : Nov. 18	1894 : Aug. 29	1894 : <i>Hyde Reporter</i> , August 31.
282	(¹) Huard, Joseph (39) ...	Saint Ellier (Mayenne) ...	Dog	1894 : Dec.	1894 : Dec.	1894 : Sep. 14	1894 : <i>L'Eclair</i> (Paris), September 15.
283	Nothard, Samuel (28) ...	Todmorden, Lancs. ...	Dog	1895 : Sep. 8	1895 : Sep. 15	1895 : Oct. 17	1895 : <i>Manchester Guardian</i> , October 22.
284	(⁵) Wilkins, Ethel (3) ...	Twickenham Park ...	Dog	1895 : Oct. 13	1895 : Oct. 15	1895 : Nov. 11	1895 : <i>The Globe</i> , London, November 12.
285	(³) Wallender, Miss ...	Temesvar, Hungary ...	Dog	1896 : Dec. 25	1896 : Dec. 26	1896 : Jan. 11	1896 : <i>Echo</i> (London), and other journals, Jan. 11 and 13.
286	(⁶) Labat, Pierre (37) ...	Bordeaux ...	Dog	1896 : Feb. 21	1896 : Feb. 25	1896 : May 24	1896 : <i>Annales de l'Institut Pasteur</i> , June 25.
287	Lambert, Thos. D. (18½) ...	Stockport ...	Dog	1895 : Mar. 8	1895 : Mar. 8	1895 : June 20	1895 : <i>Manchester Courier</i> , <i>Daily News</i> (London), and other journals, June 22; <i>Brit. Med. Journal</i> , July 4.
288	Boy ...	Orthez (Basses Pyrénées) ...	Dog	1896 : June	1896 : June	1896 : June 22	1896 : Died at l'Hôpital de la Pitié, Paris.— <i>L'Indépendant</i> (Pau), June 24.
289	A Child ...	Navarreux, Pau ...	Dog	—	—	June 26	Telegram from Pau in <i>Il Secolo</i> (Milan), June 26.
290	Chapelier-Marty (13) ...	Sauvagnou, Pau ..	Dog	1895 : June 1	1895 : June 2	1895 : June 29	1895 : <i>Daily News</i> (London), and <i>L'Indépendant</i> (Pau), June 30.
291	Openshaw, Thomas (man)	Radcliffe, Manchester ...	Dog	1895 : Nov. 20	1895 : Nov. 22	1895 : July 14	1895 : <i>Manchester Guardian</i> , July 17.

(¹) This patient was killed through jumping, while mad, from a third storey window; he was twice treated at the Pasteur Institute, in December, 1894, and April, 1895. (²) Became ill before the inoculations were finished, and died two days after their completion. (³) Treated at the Pasteur Institute, Budapest. (⁴) Treated at the Pasteur Institute, New York. (⁵) This small child received no fewer than 48 inoculations—24 during the last 36 hours of her life, and after her case had been pronounced to be *hopeless* by the doctors at the Pasteur Institute, Paris. (⁶) The biting dog fled and was not traced; the wounds (on the left hand and head) were at once cauterised with a red-hot iron.

RECAPITULATION.

INOCULATED IN PARIS:—

1. Under first formula ...	41
2. „ intensive treatment ...	28
3. „ third formula ...	157
	226

INOCULATED IN RUSSIA:—

1. At Odessa ...	26
2. At Charkow ...	9
3. At Moscow ...	6
4. Elsewhere in Russia ...	8
	49

INOCULATED AT OTHER CENTRES:—

1. In Italy ...	12
2. At Rio de Janeiro ...	1
3. At New York ...	2
4. At Budapest ...	1
	16

Total deaths after preventive treatment ... **291**

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THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 5.]

LONDON, SEPTEMBER 1, 1896.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

EXMOUTH, which has long possessed many ardent anti-vivisectionists—notably the Rev. Charles Drosier, Mr. W. H. Dunn, and Miss Hugon-Tayler—is shortly to have a Branch Society of its own, thanks mainly to the last-named of these three good friends of our cause.

WE regret to learn that Lord Leigh, Lord Lieutenant of Warwickshire, and a Vice-President of the Society, had one of his eyes removed on Tuesday, August 11th, owing to severe inflammation. The operation, which was necessary to retain the sight of the remaining eye, was successfully performed, and the noble Lord was subsequently reported to be making satisfactory progress.

EVERYONE will regret the death of Sir J. E. Millais, the great artist. Anti-vivisectionists will regret still more that the successor to the baronetcy has for a number of years been engaged in experimenting on living animals.

IN the House of Commons on the 5th of August, Mr. S. Smith asked a question as to the relations of the

Government to a Pasteur Institute in India. Lord George Hamilton, Secretary for India, in reply said: "I have no information later than 1894, when the Government of India reported that they had promised, subject to certain conditions, the services of a medical officer to the Pasteur Institute, which, they explained, was quite distinct from any Government department."

IN reference to the voting at Buda-Pesth, we are asked to explain that while 176 delegates took part, that number formed the total of votes recorded. Of these 159 were in favour of Animal Protection Societies labouring henceforth for the total prohibition of vivisection, and 17 against. Thus the majority in favour was the very substantial one of 142.

THE Buda-Pesth Congress was fertile in hints for speakers and workers in our cause. The English delegates were greatly impressed by the fact that all the continental speakers seemed on fire in the good cause. They gave no quarter to the enemy, but having convinced themselves of the facts of our case denounced in burning words, which fired their hearers' souls, the crimes against humanity fostered in the physiological laboratories.

PROFESSOR PAUL FÖRSTER, of Berlin, spoke for an hour, and his words streamed like lava from a volcano as he held up to the indignation of his audience the picture of the cruelties of science. Not for an instant did the torrent of refined and cultured oratory cease, nor did the interest of his hearers flag for a single moment while he exposed the futility of vivisectional experiment, and proved that "Vivisection was daily occupied in digging its own grave."

MONSIGNOR LANDSTEINER, of Nikolsburg, Austria, a distinguished ecclesiastic of the most benevolent aspect and charming presence, was one of the most popular and interesting speakers on our side. On account of his devotion to the cause of the animals it is said that his ecclesiastical brethren of the "sticks and stones" school consider him "half a heretic." The good priest smiles benevolently at the hard names they call him and doesn't seem to mind.

FRAÜLEIN ENGEL, of Wiesbaden, who denounced "murderous millinery," declared she would enter no Church of any denomination till the clergy boldly declared themselves opponents of vivisection. She is a winning and graceful speaker. Her sweet womanly face

and manner contrasted somewhat strangely with her uncompromising attitude towards her opponents. We say "somewhat strangely" because the amiable lady looks too benevolent to be in violent opposition to anybody, yet she had a smart brush with Monsignor Landsteiner on the question of "Bands of Mercy," of which he did not altogether approve, fearing that they might teach children to be priggish.

It was announced at the beginning of August that Mr. V. Horsley had resigned his professorship at University College. Formerly Mr. Horsley was Dean of the Faculty of Medicine at University, but he vacated that post some time ago.

WE wonder what kind of design will appear on the cover of the album containing the photographs of fifty-one vivisectors which is to be presented to the ex-Professor on the occasion of his retirement. Possibly it will consist of an arrangement of figures of animals in various stages of mutilation, with a border of oncometers, manometers, artificial respiration apparatus, electric batteries, cauteries, forceps, and knives. Here is the paragraph from the *British Medical Journal* of August 1st, announcing the interesting event:—

"Professor Victor Horsley's retirement from the chair of pathology in University College, London, has been made the occasion of presenting him with a testimonial in the form of a piece of plate and an album in recognition of the way in which he has advanced experimental pathology in this country. The album contains photographs of fifty-one of the subscribers to the testimonial, together with a record of the work which each of them has done either in conjunction with Professor Horsley or in the Brown Institution and in the Pathological Department of University College during the time these laboratories were under his direction."

THE body of M. Pasteur has been lying for many weeks in one of the side chapels of Notre Dame, awaiting the completion of the tomb at the Pasteur Institute. Amongst the numerous wreaths covering the coffin we noticed in visiting the cathedral recently one inscribed as sent by "the School of Experimental Pathology." Our thoughts were of the great cage of rabid dogs at the Pasteur Institute, and the incongruity of honouring its awful cruelty in a Christian temple.

THE *British Medical Journal* of August 15th, in a note on the Homœopathic Congress, says, concerning the question of drug testing, that "the difficulty of ordinary pharmacologists is to find the men who are ready to submit themselves to continuous experiment." Naturally! Vivisectors know too well what vivisectors are to trust their precious bodies in their hands. But why not experiment each on himself? The *Journal* says that "records of the subjective sensations of a physician experimenting upon himself, if not valueless, are vitiated by their subjective and unverified character." There remains, therefore, but the hospital ward where, under pretence of curing, continuous and verifiable experimentation can take place, satisfactorily to the—doctors at least.

MR. LEONARD HILL, M.B., Lecturer on Physiology at the London Hospital Medical College, is a vivisector well known to our Hampstead friends. As he has had

some controversy at various times with our medical supporters, the following extracts from his recently published book on "The Cerebral Circulation" will be read with interest. He says (p. 3): "It is so easy, by incomplete and faulty experiment and hasty generalisation, to throw discord into the accepted pathology of the clinician, that the experimental method has often and most deservedly been met by him with incredulity and passed over with neglect."

MR. HILL'S "researches," if they can be dignified with such a term, seem chiefly to consist in adducing evidence to disprove the conclusions arrived at by his brother vivisectors. He makes light of the results achieved by Messrs. Roy and Sherrington, and, in the manner familiar to students of vivisectors' works, uses the stereotyped expression "Our results do not bear out the conclusions of Mosso." Of course they do not. Nor will the next experimenter who tests Mr. Hill's work agree with the conclusions of Hill.

THE book renders one great service to our cause by its witness to our persistent attitude against the cruelty of brain experiments, now so common. Our opponents are almost unanimous in asserting that brain experiments cause no pain to the animals. We have always maintained the contrary, and Mr. Hill supports our contention. He says (p. 157): "Haller, in numberless experiments, found that on compression of the brain, dogs suffered pain." Again (p. 158): "Leyden drove albuminous fluid into the intra-cranial cavity of a lightly morphinised dog. As the pressure of injection rose the symptoms occurred in this order—cries, convulsions, irregular respiration, [etc.] The pain Leyden attributed to the tension of the dura mater."

ACCORDING to the *New York Medical Journal* of July 11th (p. 61), Dr. J. E. Pilcher recently told the Ohio State Medical Society that, "Of all practices, altruistic and humane in the highest sense of the words, Vivisection is one of the most notable—while vivisectional experiments are always beneficial they are never cruel." If Dr. Pilcher knew what he was talking about he knew he was saying the thing which is not; possibly he knew as little about the vivisector's laboratory as the generality of his brethren.

ONE thing, however, he told his audience which was true, and encouraging to our American friends; he declared that "the dangerous movement of embarrassing and prohibiting vivisection in the district of Columbia has met with astounding success," and he urges all true lovers of scientific progress to unite in the attempt to prevent the enactment of the bill now before the United States Senate.

MM. RODET AND NICOLAS record some experiments on wounding the heart, in the *Archives of Physiology*. The animals experimented upon were dogs, and the wounds were made by driving long pins and lancets through the chests of the creatures so as to prick and pierce their hearts, and enable the experimenters to test the influence of the injuries on the pulse. Anæsthetics were given "so as to prevent the pain interfering with

the results of the experiments." It was found that very slight interference with the heart's action was caused by the wounds, but for all that we imagine that stabbing the hearts of human beings will never become a favourite method of treating heart disease.

THE continued protests of experimenters with drugs upon animals, that all our exact knowledge of their properties is derived from vivisection, is strangely at variance with the damaging facts which leak out from time to time in the medical papers. Thus Dr. C. J. Proben read a paper before the New York Medical Association which is reported in the *Medical News* of August 1st (p. 136), in which he gives details of three deaths from the administration of pilocarpin, which occurred in his practice. The drug was administered hypodermically, with rapidly fatal results; yet it has long been tried upon animals, and if such a method of research were of any value, surely these three patients' lives need not have been sacrificed.

DR. M. FUNCK, a Belgian physician, has published a book on the Experimental Study of Sero-Therapy in Typhoid Fever, in which he says that, notwithstanding the beneficial results which are undoubtedly obtained by this specific treatment in experimentation on animals, this mode of treatment should not as yet be applied, or even tried, on man. Comment would be superfluous.

DR. JOHN CHIENE, Professor of Surgery in the University of Edinburgh, delivered an address on Graduation Day, in which he said that he believed in the gradual development of man. "I believe that it has occurred, and such a belief does not lessen my opinion of man, but it certainly increases my respect for the lower animals." Precisely! yet it is in an age which has discovered development that scientists who have convinced themselves of their near relationship to the lower animals use their fellow-creatures without pity, and disregard their capacity for suffering, which they admit is closely allied to their own.

A CONTINENTAL experimenter on the brains of dogs has recently tried the effects of boring holes in the animals' skulls and inserting pepper-corns in the brain substance. The diabolical ingenuity of vivisectors in devising new forms of torture can only be inspired by Satanic agency.

It was stated at the Buda-Pesth Congress that the arch vivisector, Goltz, calls the opponents of vivisection "the scum of humanity" (*humanitas*). Professor Goltz, it will be remembered, is the experimenter who cut off the breasts of dogs to test the maternal feelings of the animals for their puppies. As this man can only have an external resemblance to a human being his opinions on "humanity" are of very little consequence.

ONE of the latest fads in "serum-therapy" is that introduced by Ballet and Enriquez for the treatment of Graves's Disease. They extirpate the thyroid gland of dogs, and when the animals begin to show signs of disease they are bled and the serum collected for injection. Another is the use of "antistreptococcic serum" in the treatment of puerperal fever, suggested by

Marmorek. The *Practitioner* for August (p. 177) says, "A very careful and interesting account is given of thirteen cases treated by this method, of whom six died—although a certain number of the patients survived, it is difficult to believe that the serum had anything to do with it." Very difficult, indeed, we should think, but it is quite easy to believe it had a good deal to do with the deaths of the other six. In the case of one poor woman we are told that "although the authors do not specifically state it, they seem to believe that in this case the death was the result of the treatment."

CLINICAL observation has demonstrated that preparations of phosphorus and its salts have a decidedly beneficial effect where defective conditions of bone occur in human patients. This is not sufficient for the experimenters; to put it to the test Kessel (*"Virchow's Archiv,"* Bd. cxliv., 1, 1896—*British Medical Journal*, July 25th) has given it in poisonous doses to growing dogs. He found it a very strong poison; "a disturbance of digestion during the use of phosphorus, although apparently trivial, may have a fatal significance; ten centigrammes per kilogramme of body weight cause symptoms of chronic poisoning, with marked atrophic process where bone was being deposited." In no case did he find phosphorus had any favourable influence on growing bone, and he concluded that there was "no evidence in favour of the use of phosphorus in bone disease." If therapeutics had no other ground for its existence than that supplied by vivisectors, it would soon be improved off the face of the earth.

THE *Chemist and Druggist* of August 1st comments on the address of Mr. Martindale, President of the Pharmaceutical Conference, which recently met at Liverpool. Mr. Martindale endeavoured to make out that "science" accounted for all the modern improvements in therapeutics, meaning by "science" not so much vivisection as chemical science. Here is the comment of the *Chemist and Druggist* :—

"Mr. Martindale's review of pharmaceutical progress during the past quarter of a century seems to assume that it depends entirely on scientific therapeutics. This may be the case in the future, but *until quite recent times we got all our remedies either from savages or from quacks*; and notwithstanding the notable modern influx of new substances into chemists' shops, it is still those old drugs, many of them in new forms, on which the world principally relies for relief from sickness. Scientific investigators have yet to justify their oft-repeated sneers at their more humble predecessors in the field of pharmacy. The former have to their credit the immensely-important discovery of anæsthetics, and latterly they have worked perseveringly at the production of synthetic remedies, some few of which seem to have established their claim to full recognition. The President of the Conference indeed asserts that they are beating quinine out of the field, for he says that, notwithstanding its low price, this drug 'is not used in the popular way in this country to anything like the extent that it was when its value was five to ten times what it is now.' We do not know what evidence Mr. Martindale has for this opinion, which is not that of many persons well qualified to form one. The organic serums and animal extracts can hardly be said yet to be assured triumphs, and Mr. Martindale does not regard them as suitable subjects for a place in his address, though five years ago he devoted a paragraph

to that famous result of scientific research—Koch's tuberculin."

THE *British Medical Journal* of July 11th published the following paragraph:—

"A special feature in this year's German manœuvres will be supplied by war dogs which have been most admirably trained for seeking out the wounded and carrying despatches. At the command 'seek,' accompanied by a gesture indicating the direction in which the dogs are to search, they will start off; they will find the men who figure as wounded with unfailing certainty, take a piece of their clothing—cap, helmet, or piece of cloth torn off, and bring this back to the ambulance men, whom they then conduct to the spot."

We wonder how our contemporary can have the face to insert this side by side with the records of the dog torturings in physiological laboratories. But we forget; it is the fact that dogs are capable of such a high degree of intelligence that makes them such excellent "material" for certain forms of vivisection, as, for instance, when the intellectual and moral qualities are to be tested.

At the Ophthalmological Society, on July 3rd (*British Medical Journal*, July 11th), Drs. C. H. Usher and George Dean communicated a paper entitled "Experimental Research on the Course of the Optic Nerve Fibres." The experiments consisted in making wounds in the retina of animals—the organ of sight at the back of the eye—and then killing the animals subsequently and tracing the effects on the nerves.

"The wounds were made with a Graefe's knife or galvano-cautery, the ophthalmoscope being used to enable the operator to produce the lesion in the part of the retina selected. The first part of the communication dealt with the results obtained in a number of rabbits. As seen by the ophthalmoscope the wounds in the fundus presented the appearance of a white elongated gap with sharply defined edges. Its length was from about $\frac{3}{4}$ to $1\frac{1}{2}$ optic disc diameter. Among the lesions was included division of the anterior and posterior bands of opaque nerve fibres. In all the cases a tract of degeneration was found in the nerve corresponding to the wounded retina. . . . The second part of the communication consisted of results obtained in the case of a monkey, in which a lesion by means of the galvano-cautery was made between the optic disc and the yellow spot. A well-defined area of degeneration was found in the corresponding optic nerve."

It is difficult to see that any possible good can come out of all this torturing, and the experimenters make no claim that it will.

THE *British Medical Journal* of July 18th records some experiments with phloridzin, which involved starvation of the animals in addition to the poisoning:—

"It is now well known that phloridzin produces temporary diabetes when given to man or to animals. Rosenfeld has shown that it also produces fatty liver under certain conditions, and in the *Zeit. f. klin. Med.*, Bd. xxviii. Hft. 3, 4, he records the results of a number of careful experiments on dogs. The dogs were kept without food for five days; then on the sixth and seventh days 10 grains of phloridzin were given. The animals were killed on the eighth day, forty-eight hours after the first dose of phloridzin. Well-marked fatty liver was found; the organ was enlarged, the border rounded off, the colour yellow, and the consistence soft and friable. Chemical analysis showed a marked increase of fat. The liver of dogs kept without food for seven days contained 10 per cent. of fat, whilst if phloridzin had been given the amount of fat was 25·3 to 74·5 per cent."

"THE PASTEURIAN RELIGION."

The following article from the pen of Dr. Lutaud appeared in the *Journal de Médecine de Paris*, on the 28th of June last:—

Some weeks have passed since the charming poet, Armand Silvestre, opened in the columns of the *Journal* a subscription designed to raise a statue to Dr. Roux; more recently the *Press* also published "an appeal to French mothers," and organized a committee which should raise funds to erect a bust to the same person. Thus Dr. Roux is going to be twice cast in bronze for the purpose of ornamenting our public places. It is probable, moreover, that the subscribers will not stop there, but will at the same time raise a little statue to his collaborator, Mr. Marmoreck, whose serum prevents and cures puerperal fever, phlegmon, scarlatina, whitlow, erysipelas, &c. (Extract from the prospectus of the Pasteur Institute.)

What is more remarkable still is that the clever *savants*, who direct the establishment in the Rue Dutot, have succeeded in securing the support of divergent politicians. One finds on the committee names of men the most antagonistic, such as Messrs. Leon Bourgeois, Alphonse Humbert, Lucipia Jaluzot, and Lockroy, united in their admiration for Messrs. Roux and Marmoreck. This is more than veneration, it is a religion.

In the Chamber of Deputies, when Messrs. Bourgoïn and Villejean permitted themselves to throw doubt on the efficacy of the anti-toxic serums, a member of the majority exclaimed "Marmoreck saved my daughter!" The hon. member was, in fact, convinced that without Marmoreck his daughter would have died; he believed in the serum, as so many others believe in the water of Lourdes. We might almost assume that they had transformed the Pasteur Institute into a sort of Olympus, of which Messrs. Roux and Marmoreck are the gods. Everything that emanates from this temple is accepted without discussion, not only by the mothers of families, and by the readers of the *Figaro* and the *Petit Journal*, but also by numerous medical men, who prefer making their patients happy rather than to show a feeling of scepticism which might appear to be in questionable taste.

As with all religions that of the Pasteurians is supported upon terror and the fear of death; it has, like the others, the advantage of promising—not felicity in another world—but happiness and health in this. "Take our serum," say the new gods, "and you shall be preserved from diphtheria, scarlatina, and all other epidemic scourges; neither Christ nor Mahomet promised so much." This explains the immense success of the sero-therapy; it unites all the suffrages—Radicals, Royalists, Socialists, and Freethinkers. Messrs. Roux and Marmoreck also profit from the vogue. Not content with selling their products at high prices, they wish to sell the profits of the State. Last year they got a million francs, besides the subscription from the *Figaro*. This year they wish for the funds of the Paris lottery; they will have them, and much besides. Let them make the most of their success—these good things are only for a time.

For us, medical men, let us keep out of the current and guard ourselves against unreflecting enthusiasm. There is already too much staked on the anti-diphtheritic serum. Last winter the mortality from diphtheria maintained the same totals as during the years 1892 and 1893, in spite of the unlimited resort to sero-therapy. Let us recall to memory the fact that this discovery, due to Behring and not to Roux, had been applied in Germany and abandoned before the Pasteur Institute took it under its powerful patronage. Here is what the Germans, who knew it before us, say of it:—

Auerbach notifies in the *Centralblatt für Innere Medizin* (No. 18, 1896) some grave consequences produced by the serum of Behring, "which is more dangerous than useful." Gottstein publishes a large number of fatal cases, and says:—"The curative effect of the serum is not yet demonstrated; it does not confer immunity, and possesses no prophylactic action" (*Therapeutische Monatshefte*, No. 5, 1896). Soerensen publishes a report from the Blegdom Hospital, Copenhagen, and says:—"The injections of serum have been without useful action in cases of croup" (*Ib.*, No. 3, 1896).

As to the serum of Marmoreck, which has never been taken seriously in Germany, it has already gone down in France before the unanimous reprobation of practitioners. Not only does it not cure the bacterian maladies, but it aggravates

considerably the mortality from them. We have made known in this journal the opinions of Messrs. Comby, Boissard, Bar, Gaulard, and Dubrisay, and now we add that of M. Variot:—"My trials of the serum extended to but about a score of children, and I did not think I had the right to press them further; the consecutive failures of the injections were so painful and so grave, and the benefit has seemed to me so doubtful, that I have considered it would be inhuman to provoke cruel sufferings in unfortunate children, without any hope of appreciable benefit."

They may give to Dr. Roux all the money from the Paris lottery, they may raise to him statues, but they cannot prevent the truth from seeing the light. The anti-toxic serums will not survive close clinical examination and tests; in five years they will have lived their life.

THE PASTEUR INSTITUTE AS A PROFIT-MAKING CONCERN.

We have already informed our readers that a company had been formed, since Pasteur's death, to work the Institute bearing his name.

An article in *La Libre Parole*, signed by Dr. Paquelin, sets forth the conditions under which, two months after the death of M. Pasteur, the successors of "the illustrious savant" established, at the Institute itself, a commercial society with a capital of 10,000 francs. According to the writer the object of the society is threefold: first, to apply Pasteurian methods in the treatment of disease; next to acquire a neighbouring site valued at a million francs; and thirdly, to deliberately transform the sanctuary committed to their charge into a common house of barter and usance. The following extract from the statutes is then appended:—

"The general meeting shall decide whether it is necessary to distribute the whole or a portion of the profits among the shareholders; or if, on the contrary, such profits should be left in the society to be employed in the development of its operations."

Dr. Paquelin next draws attention to the fact that two members of the society, namely, MM. Duclaux and Grancher, are likewise members of the commission charged with the examination and authorization of applications for the manufacture and sale of serums; and concludes by declaring roundly that the Pasteur Institute is no longer governed on purely humanitarian lines, being neither more nor less than a commercial establishment, enjoying special privileges.

Of course the men who are carrying on the work at the Pasteur Institute under these new conditions try to put the best face they can on the matter.

According to a reporter on the staff of the *Temps*, who interviewed M. Duclaux, that gentleman declares that there is no foundation whatever for the strictures of Dr. Paquelin. The society he mentions does not concern itself with the sale of serums. There is another society, managed by Dr. Roux, which undertakes that duty. He has no desire to conceal the fact that a profit is made, quite the contrary [Oh, indeed!], but the profits resulting from the sale of serums do not go into anyone's pocket. They are devoted exclusively to the development of the Institute. [N.B. The Institute is endowed.] It is true the clause cited does exist in the statutes, but it is simply a matter of form. The rules were drawn up by a notary, who naturally adopted the phraseology usual in such cases. How is it possible that a hospital or a dispensary could be worked for private profit? [Why form a trading company?] It is also true that he is a member of the commission on serums, but he never applied for the post. Moreover, the attributions of this commission are purely consultative; it has no power to grant or reject authorizations. The Minister alone is competent in this matter, and as a matter of fact the commission has only given an unfavourable opinion in a single case.

"With the evidence before us," says the *Scalpel*, for July, "we can only say that it is very unfortunate the clause providing for the disposal of profits should have found its way into the statutes of the society. It certainly seems to afford a *prima facie* excuse for Dr. Paquelin's very severe criticism, and we are decidedly of opinion that the sooner it is expunged the better. As it stands the defence advanced by M. Duclaux is unquestionably a lame one."

CORRESPONDENCE.

THE TREATMENT OF HYDROPHOBIA.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Will you kindly permit me to supplement slightly my previous letter on the treatment of hydrophobia?

The popularity of Pasteurism, which, notwithstanding the diplomatic mummeries of its promoters, has long been in a tottering and contingent state, begins to show unmistakable signs of approaching dissolution. The death from hydrophobia of Thomas Openshaw, at Radcliffe, makes the fifth patient within three weeks who has died of that disease after undergoing the Pasteurian inoculations, and brings the total number of victims to 291.

The press naturally gives vent to its conviction of the worthlessness of such an empirical and objectionable system, and its surprise at the persistence with which it is followed, in the face of the clearest evidence that it is of no use whatever.

The eminent novelist and poet, Lord Lytton, called the water-sheet a magic girdle, and his description is no exaggerated one of the power of water when scientifically applied at different temperatures, to produce the most remarkable effects upon the human constitution, both mental and physical.

Such effects are, however, entirely consentaneous with reason when we consider the concentric unity of our myriad-functioned microcosm, every function of which has indirectly power to influence and modify all, so that the most subtle and central organic conditions upon which healthy disposition or consciousness depend, are under the control of the apparently simple and external, which are in reality but continuations of the more complex and central nervous processes; hence, the power to control, to soothe, relax, and compose the nervous through the circulatory system, and the circulatory through the glandular and the cutaneous systems by diaphoresis.

Let us then renew our faith in Nature, which is reason, and instead of sending bitten people to be poisoned with injections of solutions from the spines and medullæ of rabid animals, take them to the Buisson Institute, Church Road, Upper Norwood, the presiding physician at which has had extensive experience in hydropathic science, and where they will certainly run no risk of having hydrophobia communicated to them under the pretext of preventing it.

All treatment at the Buisson Institute is gratuitous.

I am, Sir, yours truly,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

SUGGESTIONS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Your *Zoophilist* for this month reached me, and I could not help regretting that hitherto you have not (1) registered that publication as a newspaper, and (2) asked your readers seriously to lay to heart how sadly they imperil such a glorious cause as ours by disunion. Thus on pages 68, 69 and 70 we read reports of (1) The Independent Anti-vivisection League, (2) The Pioneer Anti-vivisection Society, and (3) of our own. Elsewhere I read of an Anti-vivisection Society captained by a Mr. Jesse, and of yet another near the Royal Academy; and we have five Societies all intent, I hope bent, on abolishing vivisection, but all fighting on their own account, all incurring no small expenses in secretary's and other fees. True, "Anti-vivisection" is the watchword, but instead of showing one stalwart opposition we let the foe get in between our five separate Divisions. Why can we not unite and show one bold front and stand in serried ranks to meet the foe?

In the matter of other sorts of cruelty and their prevention, the matter got to be such an unmitigated nuisance to all lovers of animals, as well as obstructing animals' welfare even, that Mr. Colam drew special attention to the matter in his last annual report. Why don't you do likewise in the *Zoophilist*?

Our Victoria Street Society has a capital list of patrons, presidents, etc., etc., *ad libitum*, and why should folk want to go and start fresh societies and waste their energy thereon, when unity with us would easily accomplish all that we desire. To be sure I note how prolific the Piccadilly Anti-vivisection

Society is in most useful pamphlets. Is not that all the more reason that they should unite with us, who have but monthly ones?

2, Pump Court, London, E.C.
August 7th, 1896.

Yours faithfully,
H. CUNLIFFE.

[We concur in our correspondent's suggestions, and should like to see them carried out. The first, however, is impossible as the postal law stands; the second does not depend for its accomplishment on law, but on goodwill. The Victoria Street Society has plenty of good pamphlets.—ED. Z.]

ENGLISH AND AMERICANS AT THE BUDA-PESTH CONGRESS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Will you permit me, as a member of the late Congress at Buda-Pesth, to tell you in a few words to our English and American friends how very grateful I feel towards them for the help they lent our cause in attending the Congress, and for their hearty sympathy shown on the occasion?

A most favourable impression has thereby been made on our Continental friends, which will doubtless serve to strengthen kindly feelings between the different nations, as also to accelerate the progress of our cause. Many thanks for their noble generosity.

ONE OF THE EVER-INCREASING NUMBER OF TRUE FRIENDS OF ANIMALS.

Stuttgart, August, 1896.

MEDICO-SURGICAL ABERRATIONS.

REPLY TO DR. HULMANN IN REGARD TO THE GENIUS OF
MODERN SCIENCE.

(By Dr. Hubert Böens, in *Le Médecin*, of Brussels.)

D.—Does Dr. Böens remember what was the condition of surgery in the days of Dupuytren, Nelaton, Seutin, Ansiaux, and Co.—the other day, in fact?

R.—Perfectly. The surgical operating chambers were infected, and without pure air. The attendances on the wounded were few and infrequent; cleanliness was unknown. Patients, whether surgical or accouchement cases, were hardly fed at all. The absurd iodoform had not replaced the senseless storax. That hospital rot, gangrene, infection putrid and purulent, reigned everywhere, and at last they finished by not daring to operate in hospice or hospital. I was one of the first to attempt to reform this sad state of things in the Bavarian Hospital in having the wounded removed into the garden for operation; in advising frequent attention to their wounds, and the free use of water with gin (*genièvre*) as the only antiseptic—in short, in enforcing perfect cleanliness, having the air revived by the sun, the windows whitened to temper his rays, the ceilings and floors frequently cleansed.

Everywhere where these hygienic measures were taken, whether amongst patients of the industrial or other classes, there was no longer any question of infection, of gangrene, or of mortification among the wounded, whether surgical patients or others. None of the new antiseptics repudiated so saucily to-day by Emile Gautier has any claim to share in these improvements in regard to surgery, or in their brilliant results. There are no pathogenic microbes, either in Paris or Brussels, which can resist frequent washings, perfect cleanliness, and gin (*genièvre*) disinfection, in patients fed on wholesome food, with fresh air and sunlight to invigorate them daily.

Dr. M.—Böens does not believe in microbic causes, only in microbic effects.

R.—I will finish by admitting that I am so far advanced in my dotage as to be obliged to repeat what I have said so often since I took an interest in the science of practical medicine. The word *microbe* is one which has no more precise meaning than that of *ether*, the hypothetical fluid of planetary space.

Only a simpleton would deny that maladies which are propagated from animal to animal, or from man to man, like hydrophobia, glanders, variola, etc., are produced by a germ, a microbe, or virus of some sort. In the same way diseases arising in insanitary places and structures, such as cholera, typhus, intermittent fevers, have also for the source of their propagation a miasma, a germ, or a microbe of some kind.

Let the microbes descend from Heaven, as Pasteur believed, or let them be set up in certain pathological conditions of the organism, such as under attacks of hydrophobia, croup, scarlatina, it matters little to us. Once formed by organic evolution, they are apt to reproduce and propagate themselves and their morbid effects wherever they meet with subjects favourable to their development. But beyond that have all maladies an extraneous germ, a microbe foreign to healthy persons for their cause? Does not simple cold bring on sore throat, erysipelas, pneumonia, fevers, abscesses, peritonitis, tetanus even, without the intervention of any microbe or germ previous to or concomitant with the disease? How is it that the pathological secretions resulting from affections of a climatic origin—for example, those resulting from catarrhal ophthalmia—do not fail to transmit the malady of which they are the effects, waste, or scoria, to healthy subjects upon whom they fall and remain?

D.—Does Dr. Böens admit the eloquence of figures?

R.—Yes, and no. Statistics are a fine thing, but in establishing a narrow and restricted point it is possible to make them prove what is desired.

D.—Have not the modern preventive inoculations revived the science and art of medicine?

R.—They have put them back a century. If civilised peoples could be made to understand and practise true hygiene, where they are now careless and negligent, to learn that cleanliness, rather than the resort to antiseptics, is the scientific law, it would be easy to teach them that all organic pollution, such as viruses, anti-venins, matter, and morbid serums, can only engender in the healthy body similar affections to those from which they have been derived. And clinical science on its side, relying on the universal biological creed, upon physiology, and upon pathology, would proclaim that it is impossible to cure the effects of a malady by the same means as have produced those effects. Pasteur sought to prevent and cure hydrophobia by a vaccine drawn from rabbits. M. Nocard seeks to prevent and cure tetanus with his serums! Nonsense! Sero-therapy is a decoy, a humbug, a senseless thing, which has claimed, and still claims, day by day, numberless victims, which has never cured by itself a single patient; and the enlightened intelligence of the nineteenth century ought to repudiate it as the maddest of human insanities, the wildest hallucination of scientific mysticism, which has too long led the medical profession far away from what should be its legitimate track.

VIVISECTION OF CRIMINALS.

(FROM THE MONTHLY JOURNAL, "ANTI-VIVISECTION.")

The following was published in the *Aurora Daily News*, June 10th:—

Under the head, "Barbarous v. Scientific Methods in the Disposition of Capital Criminals, with a Reply to Critics," Dr. J. S. Pyle, of Canton, Ohio, issues another pamphlet in pursuance of his argument, or plea, that condemned criminals should be given over to vivisection for physiological experiment. At his request a Bill to this effect was introduced in the Ohio Legislature, November 3rd, 1894. Prior to this, October 3rd, 1893, his leading paper, "A Plea for the Appropriation of Capital Criminals to the Experimental Physiologist," had been read at the Tri-State Medical Meeting held at Peoria, Ill., and it was published in the December numbers of the Tri-State Medical Journal and the American Journal of Politics. The fact that this paper obtained such recognition shows that the proposition is not startling to medical minds in general; and the further fact that it is openly endorsed by other professional men, including ministers and lawyers whose names are given in this later paper, furnishes food for contemplation as to the final result when such law shall have become enacted—if it ever does.

It has long been predicted by close observers of the methods of vivisection, and the unsatisfactory results of those methods, that human subjects would again be openly demanded. I say "again" advisedly, for in ancient history we read of many human sacrifices to the god of science.

Among other things in defence of his Bill, Dr. Pyle observes: "The right to punish being based upon the law of justice, capital punishment and experimental research can be defended and authorized upon the same ground." He con-

tends that "if the law of justice is obeyed we are compelled to enforce the death penalty"—a position by no means sanctioned by all students of political and social economy.

Dr. Pyle deprecates the waste of valuable material—the human body—done now to death by electrocution or hanging—when it could serve such a purpose in yielding knowledge to research. He deprecates, ridicules and condemns "sentiment" in human beings, as dwarfing their reason and preventing fair judgment in regard to any question. . . .

Further on, Dr. Pyle, still pursuing his argument that death should be the punishment of the condemned criminal, declares "if the purpose of the law is followed the right to experiment upon capital criminals cannot be denied. To evade this appendix to the criminal statute is simply defeating in part the object of organized society and wastefully destroying valuable material that might be used to good account in the advancement of mankind. . . .

"That part of medical science which applies solely to the human constitution cannot be advanced without a proper use of human subjects. . . . Questions impossible to be studied upon the lower animals remain unsolved. . . . Vivisection upon the lower animals opens a field of unlimited importance for the same work upon the capital class of human subjects. That part of medical science which refers directly to the human organism cannot be studied upon any other class of animals."

This article is not written in total condemnation of Dr. Pyle's reasoning, for he has an advantage which he fails to make use of, namely: In the vivisection of criminals punishment is meted out to the guilty, deserving of punishment, whereas the vivisection of animals is an undeserved punishment of the innocent. This, however, approaches too near that quality, "sentiment," which he desires to be understood as ignoring. But the sentimental anti-vivisectionist might argue that strict justice would sanction the vivisection of the guilty criminal rather than the innocent animal.

FOREIGN INTELLIGENCE.

UNITED STATES.

Among the signers of the petition to *restrict* vivisection in the District of Columbia, which is really the City of Washington and its environs, we learn from *Our Dumb Animals* (Boston) were the names of six judges of the U. S. Supreme Court, a number of Bishops (including the Rector of the Catholic University of America), General Nelson A. Miles, and a long list of notables.

IF THERE BE NO FUTURE.

"If there be no future compensation to animals for their sufferings in this world *then is their lot indeed a hard one*—and if there be no punishment hereafter to human beings for cruelty inflicted upon animals *here how can we reconcile it with Divine justice?* But if, on the other hand, there be punishment hereafter for cruelty inflicted on animals *here what a fearful account some vivisectors in Europe, and perhaps many here, will some day have to render.*"—Geo. T. ANGELL (Boston).

BUDA PESTH.

REMINISCENCES OF THE CONGRESS.

Miss K. Deighton, who resides at Stuttgart, and who took an active part in the late Congress, writes:—"Prof. Dr. Julius Szalkay was general secretary at the Congress, and—humanly speaking—without his indefatigable labour in this capacity the Congress would either *never have taken place* or we should probably have suffered an *ignominious defeat*. His bureau was simply the ark which saved us from a flood of pro-vivisectionists' manœuvring. He has both worked desperately and has been severely tried whilst endeavouring to give us this chance. We owe him an immense debt of gratitude. Having had the honour of lending him aid as far as was in my power, I have been able to follow the whole proceeding, and, I must say, his patience and indomitable courage were something I had never before witnessed in our work. For English leaders it may not seem so wonderful, but I have only heard of the leaders on the Continent in Congress matters. The very heartiest thanks are due to Dr. Szalkay for his noble self-imposed work in securing to the Congress the

opportunity of debating vivisection, which cost him the utmost efforts. Already our enemy has begun to attack us in the *Pester Lloyd*, talking a great deal of nonsense and warming up the old claims about discovery of the circulation of the blood and ovariectomy being due to vivisection. I hope to have Dr. Berdoe's and Rev. J. Baird's excellent speeches largely distributed in the German translation, which was very good. Other splendid workers are Herr Bergner, and Herr Fliegel (Zurich) and Warnus (Linz)."

Miss A. Hugon-Tayler, of Exmouth, one of the English delegates, writes:—"You will, I trust, be interested to learn that I have returned safely from the great battle of Buda Pesth. 'It was a famous victory,' and worth all the trouble spent on it. I feel quite proud to have had a share in it, and to have come into touch with so many of the continental anti-vivisectionists. I have read this month's *Zoophilist* with more than usual interest. The Very Rev. Dr. Landsteiner, a Roman Catholic dignitary, spoke most feelingly, somewhat stirred by Fraülein Agnes Engel, of 'Murderous Millinery' fame, who had expressed her doubts as to the attitude of priests on the vivisection question. But the speech, to my mind, was that of Herr Alois von Warnus (from Linz) who was the first to support Dr. Paul Förster's resolution. I never heard anything more forcible, more eloquent, more soul stirring. German being his natural language it was simply splendid. No mere perusal or repetition could give any idea of that speech which (and Dr. Förster's noble speech also) could not but sway the best feelings of those present into the right and higher direction."

Miss A. Winter, dating from Sandycove, Kingstown, co. Dublin, writes as follows:—"Signor Franco Riccabone, Secretary of the Turin Society for the Protection of Animals, has requested me to inform you that at the Congress of Buda-Pesth the Turin Society was represented by the noble Advocate Vittore Tattara, Head of the Royal General Consulate of Italy, in the Hungarian Metropolis, who, according to the instructions received from the Turin Society, voted against vivisection. It was at the request of the Turin Society that the Italian Government, or rather the Minister for Foreign Affairs, authorized his Majesty's Consul Tattara to represent that society at the Congress in question. This fact is considered of much importance, as the Turin Society thus voted against vivisection, through the medium of a Government functionary, and Signor Riccabone considers that it deserves to be mentioned in the English periodicals opposed to vivisection. I feel sure that you will be interested in the above information, and also in another fact, possibly already known to you, that a new President has lately been elected by the Turin Society, Baron Lucifero, an intimate friend of the late Dr. Riboli, and, like him, opposed to vivisection."

ANTI-VIVISECTORS ATTACKED AT CHELSEA.

On Sunday afternoon, August 2nd, an open-air meeting was held near the Pasteur Institute at Chelsea, to protest against the danger that the people living near this institute will run should the licence be granted for experiments. Mr. F. Longman was addressing the meeting when a man backed up by a number of students attempted to break the banners. A free fight took place, and Mr. Longman and several of his friends had a rough time of it. After things became calmer, Mr. Longman said that he wanted, and was going to have, freedom of speech, and he begged of the people present to hear both sides. He concluded by moving a resolution, asking the Home Secretary to refuse to license the institute. An amendment was moved, but the resolution was carried by an immense majority, and the crowd howled and hissed at the students present until they beat a retreat.—*Weekly Times & Echo*, Sunday, August 9th, 1896.

THE MUZZLING ORDER.—The number of dogs which have been seized in the County of London between February 17, when the muzzling order came into force, and July 18, is 24,596, an average of 161 per day. Of these about one quarter have been claimed by their owners at the police stations and a large number of the remainder have been destroyed at the Dogs' Home, Battersea. The number of cases of rabies in London during the present year have been—in January, 25; February, 25; March, 22; April, 11; May, 11; June and from July 1 to July 23, 12.—*Times*, August 1st. [From the final figures it is clear that muzzling does not stamp out or even prevent rabies, i.e. if the reported cases be reliable.—Ed. Z.]

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, TUESDAY, SEPTEMBER 1st, 1896.

FOREIGN ZOOPHILIST SOCIETIES AND VIVISECTION.

THE supplement of twelve pages given with the *Zoophilist* of May, 1882, consisted of Tables of all the European Societies for Prevention of Cruelty to Animals, with notes of their attitude on the Vivisection question, so far as Miss COBBE, then Hon. Secretary of the Victoria Street Society, had been able, through a most laborious inquiry, to obtain information.

Of these societies, 132 belonged to the United Kingdom, being (in England) chiefly branches of the Royal Society for Prevention of Cruelty to Animals. Of these we may make an analysis on a future occasion. The 152 Continental Societies (of which the number of members and names of secretaries are given in the Tables), are specially interesting at present, in view of the recent vote at Buda-Pesth. By reference to their attitude in 1882 we may measure the progress of public opinion during the intervening fourteen years. Excluding nine societies, which had been recently founded in various countries expressly to oppose vivisection, there were (in 1882) of Societies for Prevention of Cruelty:—

In Germany	...	29	Against vivisection.
		57	In favour of vivisection.
		39	Divided on the subject.
In France	...	6	All divided in opinion.
In Italy	...	5	Against all vivisection.
		2	For restriction.
		1	Divided.
In Holland and Belgium	...	4	Against all vivisection.
		2	For restriction.
		5	Undecided.
In Denmark	...	1	Against all vivisection.
		1	For restriction.
		1	Had not discussed the question.
In Norway...	...	2	Against vivisection.
		2	Had not discussed the question.
		2	Failed to reply to inquiries.
In Sweden	...	1	Against vivisection.
		1	For restriction.
		4	Had not discussed the question, or failed to reply.

In Switzerland	...	1	Against vivisection.
		3	Doubtful.
In Austria-Hungary		7	Against vivisection.
		1	Failed to reply.

In Spain and Portugal...	...	The six Societies had taken no notice of the subject.	
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From this it will be seen that in 1882 there were on the continent of Europe out of 152 Societies for Prevention of Cruelty exactly fifty in favour of the total prohibition of vivisection.

In 1896, 177 of these and other more recent Societies, voted formally through their delegates for prohibition; and if we deduct from the number the English and American contingents, we find now at least 150 Continental Societies on the side of such prohibition. In other words, our cause abroad has now exactly THREE TIMES as many supporters as it possessed fourteen years ago, among persons specially interested in humanity to animals.

THE OLD STORY.—VIVISECTION IN 1895.

WE confess that we were in hopes, from the very kindly and sympathetic demeanour of the HOME SECRETARY towards the deputation which waited upon him as we reported a month ago, that there might be some improvement observed in the official annals of vivisection for the year 1895. But it is "the old story," in more senses than one. In the first place the number of experiments has increased, as has been the case annually (excepting 1894) since 1889; and in the second the report, with the simple alteration of figures, is couched in almost precisely the same terms as last year. The latter fact, in itself, goes a long way to show plainly what a perfunctory thing is the inspection, so-called, as at present carried out. Dr. G. V. POORE has nothing new to say, except that the number of experiments has increased. Down even to the statement that "the licensees have, *as usual*, manifested strict loyalty to the letter and spirit of the Act," it is the old story. But Dr. POORE convicts himself of inaccuracy, not to say untruthfulness, in making this latter statement in regard to the year 1895, because he immediately goes on to say that in two cases the licensees were not loyal to the Act, and that they committed irregularities. As would be seen from the report in the last *Zoophilist* of what was said on the occasion of the deputation to the HOME SECRETARY, Mr. BRYAN pointed out that in the intervals between the Inspector's visits "the animal has no friend in court, and is at the mercy of the vivisector." He might have gone further and expressed the gravest doubt as to whether at any time the animal has a friend in the present Inspector, although Parliament undoubtedly intended the Act to operate in the direction of mercy to the animal, and the Inspector should be the person to enforce it. But Dr. POORE is on the other side—a fact which is made apparent in this way. He is the Professor of Medical Jurisprudence and Clinical

Medicine at University College, London. At that College there were in 1895 no fewer than eighteen vivisectioners at work. These included Mr. V. HORSLEY and Dr. SCHÄFER, two of Dr. POORE's professorial colleagues. Engaged in such a place, so tainted with vivisection, and deriving part of his livelihood from such an institution, it is impossible to believe that Dr. POORE is uninfluenced by his surroundings and associations. The air of University College is thick with pro-vivisection sentiments, instincts, aspirations, and acts; as, if report speak truly, a recent letter in the press alleged it to be thick with the cries of the victims of vivisection. If Dr. POORE be a friend of the animals experimented on in the laboratories he visits so occasionally, he should sever his connection with University College or any other vivisectioning centre, and until he does so he must be regarded as a "suspect" on this point.

The Inspector reports, in precisely the same words as he used in the previous year, that "Table III. shows the number and the nature of the experiments performed by each licensee mentioned in Table I., specifying whether these experiments were done under the license alone or under any special certificate, so that the reader may judge which experiments (if any) were of a painful nature." But, as if to prevent the reader from forming a just judgment, especially in regard to experiments under Certificate A, dispensing altogether with the use of anæsthetics, he repeats, also in stereotyped form, that "Experiments performed under Certificate A. (or E. or F. linked with A.) are practically always of the nature of hypodermic injections or inoculations, as reference to Table III. will show." Now, "reference to Table III." means reference to what the vivisectioners choose to tell through the medium of the official return, and, of course, they choose to make things agreeable—to themselves. The Inspector, from his own knowledge, knows nothing of what has really been done, and it excites our indignation to be told year after year, in the same precise terms, in the official report, that no pain has been inflicted, when it is obvious from revelations made elsewhere by the same vivisectioners that many experiments, physiological in nature, involving surgical operations, must have punished the animals very severely.

It is a biting satire on the "restrictive" Act at present in force that the longer it is in existence the more vivisection increases. The present return shows that in 1895 there were 213 men licensed, as against 185 in the preceding year, while of these 148 admit having experimented, as compared with 129 in the previous year. The total number of experiments has risen from 3,104 to 4,679, an increase of 1,575. Of the whole, the enormous proportion of 3,119 were admittedly done under certificates dispensing wholly or partly with the use of anæsthetics. As we said at the outset, we were in hopes that some improvement might have been visible in this new return. We are, on the contrary, painfully disappointed. It should be borne in mind, however, that the present HOME SECRETARY only came into office after the middle of the year under review. He could hardly,

therefore, be expected to have any influence over the present return. The character and number of the vivisections of the year 1895 would be fixed before his advent, the licenses and certificates running as a rule from January to December. He might, however, have given the report to the public a little earlier in the year. To publish in early August a return which does but bring up information to the end of the preceding December, is decidedly an example of official sloth which it is desirable not to repeat. The return came out so late that it was next to impossible to raise a single question on it in Parliament. The estimates had been disposed of, and only the clearing up of the session remained to be done by a wearied and worked-out House of Commons. We shall look forward to an amendment in this particular another year, and also in other and more important respects as well. We shall expect to see the HOME SECRETARY's goodwill reduced to a tangible shape, by vivisection and all its attendant cruelties being, at any rate, reduced to much narrower limits. For purposes of comparison we tabulate below the statistics of the last ten years:—

LICENCES AND CERTIFICATES.—ENGLAND AND SCOTLAND.

Year referred to.	Persons Licensed.	No. of Licensees who Experimented.	Certificates Granted and Used.					
			A ¹	B ²	C ³	D ⁴	E or E.E. ⁵	F ⁶
1886 ...	66	54	26	21	19	—	15	
1887 ...	82	64	41	22	22	1	17	
1888 ...	75	55	38	21	19	—	15	
1889 ...	87	66	43	34	15	—	18	4
1890 ...	110	77	60	46	14	—	24	3
1891 ...	152	109	84	48	25	1	26	3
1892 ...	180	125	92	75	24	1	39	4
1893 ...	184	135	120	102	32	2	59	3
1894 ...	185	129	122	108	32	1	67	6
1895 ...	213	148	124	107	42	1	77	8

EXPERIMENTS MADE.

Year referred to.	Under Licenses alone.	Under Certificates.						Total.	No. of Admittedly painful Experiments.
		A ¹	B ²	C ³	D ⁴	E or E.E. ⁵	F ⁶		
1886 ...	297	458	213	70	—	57	1035	40*	
1887 ...	357	582	162	46	—	73	1220	71	
1888 ...	239	498	195	82	—	25	1069	8	
1889 ...	428	644	170	75	—	18	1417	88*	
1890 ...	872	796	255	57	—	112	2102	316	
1891 ...	875	1363	210	111	—	94	2661	No return	
1892 ...	1046	2239	303	125	—	224	3960	No return	
1893 ...	1061	2183	317	140	—	341	4046	No return	
1894 ...	942	1507	340	128	—	173	3104	No return	
1895 ...	1333	2317	603	227	—	190	4676	No return	

¹ Special for experiments without anæsthetics.

² Dispensing with the obligation to kill the animal before recovering from anæsthesia.

³ Certificates permitting experiments in illustration to lectures (use of anæsthetics obligatory).

⁴ For the further advancement of knowledge by testing previous discoveries.

⁵ Permitting experiments on cats or dogs, without anæsthetics. Linked with A or B.

⁶ Permitting experiments on horses, mules, or asses. Linked with A or B.

* The report of these cases is accompanied with a notification that the pain inflicted was in some slight only.

The following is a list of the towns, as given in the Returns, where laboratories were registered in the year 1893, with the number of vivisectors actually at work :

ENGLAND AND SCOTLAND.					
Licensed Places.				Vivisectors at Work.	Increase.
Aberdeen	...	...	...	6	3
Cambridge	...	...	...	13	—
Cardiff	...	...	...	1	1
Dundee	...	...	...	1	—
Edinburgh	...	...	...	18	2
Glasgow	...	...	...	12	7
Leicester	...	...	...	1	1
Liverpool	...	...	...	7	4
London—					
University College	...	...	...	18	2
King's College	...	...	...	7	—
St. Bartholomew's	...	...	...	11	—
Guy's Hospital	...	...	...	7	1
St. Mary's Hospital	...	...	...	3	1
St. Thomas's Hospital	...	...	...	5	—
Charing Cross Hospital	...	...	...	1	—
Veterinary College	...	...	...	5	1
College of State Medicine, 101, Great Russell Street	...	...	...	1	—
Brown Institution	...	...	...	9	1
Laboratory of Royal Col- leges of Physicians and Surgeons	...	...	...	11	—78
Manchester, Owen's College	...	...	...	6	3
Netley	...	...	...	1	—
Newcastle-on-Tyne	...	...	...	1	—
Oxford	...	...	...	2	—
Wadsley	...	...	...	1	—
				148	

IRELAND.

In Ireland, for which part of the United Kingdom Sir W. THORNLEY STOKER is the Inspector, six men are returned as having been licensed, and three as having experimented. Dr. STOKER states, in regard to the animals experimented on, as follows:—

"Eight experiments were performed by one gentleman under his licence, and eight and twelve, respectively, by the two holders of certificates. The animals used were rabbits and mice. The experiments were, in my judgment, useful and proper ones, and free from pain, except in so far as the puncture of a needle for inoculation may have caused slight pain. Four were directed to the diagnosis of canine rabies; four were for the purpose of testing the virulence of bacterial cultivations; twelve were for the study of metabolic and temperature changes; and eight to trace the conduction in the central nervous system."

There is always this restricted kind of report from Ireland. We trust it is to be relied on, but independent evidence on the point is lacking or adverse.

IRELAND.

Licensed Places.

Vivisectors
at Work.

Dublin—

Bacteriological Laboratory, Cecilia Street 1

Belfast—

The Physiological Laboratory, Queen's

College 2 — 3

THE BRITISH MEDICAL ASSOCIATION AS VIVISECTOR.

In our last issue we alluded briefly to the "Report of the Scientific Grants Committee" of the British Medical Association, which is to be found in the *British Medical Journal* of July 18th. It is scarcely a matter of surprise that the *British Medical Journal* is the ardent defender of Vivisection which it is, seeing that the Association of which it is the organ is itself actively engaged in the practice, expending between £700 and £800 a year in "Scientific Grants" and "Research Scholarships," the larger amount of which is devoted to experimenting on living animals. The Report of the Committee summarizes the outcome of this expenditure for one year, and shows the Association what it gets for its money. We will endeavour to give our readers some notion of it as well.

Dr. T. GREGOR BRODIE received £15 "for continuing a work upon muscle," a work which he is still continuing, and appears likely to continue *ad infinitum*, without reaching any very definite result. No details are given, but it is mentioned that in the course of other experiments made, by himself and Mr. A. E. RUSSELL, "nucleo-proteids" were injected into the blood-vessels of living animals. The usual note is again appended here: "This piece of work is still incomplete." Dr. A. L. GILLESPIE (£5) has made "many experiments" on the intestinal digestion of the dog. The principal result seems to have been that he found the contents in all portions of the bowel to be acid in reaction. This means that different parts of the bowels were opened and their contents examined in different animals, involving operations of a very severe character.

It is a well-known fact that soon after death the tissues of the body begin to be distended with gas. Dr. A. A. KANTHACK received £10 for investigating the cause of this. Of course he found bacilli at the bottom of it. In fact the motto of modern pathology is—*cherchez le bacille*. We have no objection to this; but, unhappily, no sooner does a researcher find a microbe than he is seized with the desire to inject it into some living animal:—

"Experiments were made on animals with numerous forms of *B. coli* obtained from all possible sources. Broth cultures were inoculated into the ear vein of rabbits, and the animals killed fifteen to thirty minutes later. The animals were then incubated at 37° C., and next day their organs examined. The liver and spleen invariably showed emphysema and contained the *B. coli*."

The sum of £25 was voted to Mr. GUSTAV MANN "for investigating and studying the changes which nerve-cells

undergo as the result of functional activity and fatigue, and the laws which govern changes in sympathetic, motor, and sensory cells." Such are the terms of the grant as mentioned in the list. It would seem that the terms on which money is voted are interpreted somewhat loosely by the researchers; for "changes in nerve-cells" figure very little in the report, which deals with innumerable observations on stimulation and cauterization of nerve-centres:—

"Mr. GUSTAV MANN has made the following report on experimental work (1) as to relative amount of development of functionally similar areas in different animals; and (2) as to the existence of higher and lower centres in the cerebrum. Results: The psychomotor centres for the neck, arm, leg, tail, and anus lie in the order indicated, from before backwards, close to the mesial longitudinal fissure, in an area (hedgehog, rat, and rabbit) corresponding to the first or marginal convolution of the cat's and dog's brain. (1) In the rabbit the centres for the arm and trunk lie in the bulging part of the marginal convolution, which latter represents a primitive sigmoid gyrus. *In the hedgehog no trunk movements could be elicited because of anæsthesia.* (2) Facial movements in the rabbit are produced by centres lying external to the neck centres, while eye movements are produced by centres lying external to the posterior limb of the lateral fissure. In the cat the centres for facial and eye movements lie in the second or lateral convolution, and we have thus, as regards the second external convolution, the same arrangement in rodents and in carnivora. (3) Eating movements, situated anteriorly, are sharply defined from the ear movements, situated posteriorly, by the Sylvian fissure in the rabbit; while, again, in the cat the corresponding region for eating movements lies in the fourth or Sylvian (and also, perhaps, third or supra-Sylvian) convolution. (4) Ear movements in the cat may be obtained from the region behind the Sylvian fissure (Baginsky), that is, from the same region as in the rabbit's brain, but also from the anterior portion of the third or supra-Sylvian convolution lying above the Sylvian fissure. (5) Eye movements are represented in the dog by centres much more highly developed than in the cat, thus giving to the brain of the dog, when seen from above, a pyramidal shape, the base situated posteriorly, and corresponding to the specially-developed eye centre. In the cat we have, on the contrary, the ear centres more highly developed, and these produce a bulging on the latter aspect of the brain, the latter attaining here its maximum width. In the rabbit the eye centres are relatively as well developed as in the dog although no convolutions exist."

And so on for over a column of the *Journal*. The sentence italicized would seem to shew that the anæsthesia was imperfect in all the animals except the hedgehog. Before we reach the conclusion of the report we find that some allusion is made to the object for which the grant was made. It is not a very cheerful allusion, and, as usual, "more experiments" are required:

"As regards the histological portion of the research, Dr. MANN regrets to say that the difficulties he has encountered are so great, that he will have to do more experiments before making his observations public; he states (1) that probably he was mistaken in his previously published opinion that nerve cells enlarge during activity, though nuclei do enlarge. (2) The collapse of cells during fatigue is in all probability the result of preparation, and does not exist normally. The shrinkage which one sees in preparations is the direct result of

consumption of food materials stored up during rest. (3) However long inanition may be kept up (twenty-two days), the chromatin inside the cell protoplasm of nerve cells does not disappear; if anything it is increased in amount provided the nerve cells are not called upon to function."

"Inanition," it must be understood, is "scientific" for starvation. It may fairly be said that Mr. GUSTAV MANN has fully earned his twenty-five pieces of gold, and we have no doubt the appetite of the British Medical Association for vivisection is duly gratified to that extent.

Ireland has been almost as free from vivisectioners as it is from noxious reptiles, but under the fostering care of the Association the experimenting mania seems to be taking root at Belfast. Mr. C. E. SHAW received £25 for researches "on the course and connections of the degenerations arising from lesions of the occipital lobe in the higher vertebrates." He has experimented on four species of monkeys in the physiological laboratory at Queen's College, Belfast. That is to say, he has destroyed portions of their brains and studied the changes that have followed in the nerves originating in those portions. "Though too early to give a definite opinion," the report says "the results, so far, seem to be consistent, and to differ in some important respects from those obtained by previous experimenters."

Dr. STODDART, of Plumstead, seems to have found animals cheap, for he returned £16 10s. out of £25, and yet he has a good deal to say for himself.

"Dr. W. H. B. STODDART has been engaged in a research which was undertaken with the object of determining the ultimate destination of the fibres composing the direct pyramidal tract. Up to the present he has only attempted monkeys, dogs, and cats. Each experiment consisted of four stages: (1) The vault of the skull was removed over both areas; (2) the medulla oblongata and upper part of the spinal cord were exposed by the removal of arches of the upper three cervical vertebræ and part of the occipital bone round the foramen magnum; (3) the dura mater was opened, and an attempt made to divide the medulla longitudinally in the middle line so as to divide the decussation of the pyramids in front; (4) the motor area of each cerebral hemisphere was systematically stimulated by a faradic current, and movements were noted which were obtained in the trunks or limbs."

In some of the animals, we learn, the "shock of the operation" was so great that the brain did not react and the experiment failed. Out of eleven dogs two died. We also read that "out of four monkeys, three bonnet monkeys suffered too severely from shock for the results to be of any value. One Jew monkey gave satisfactory results." Two cats on which Dr. STODDART operated were fortunate enough to die.

Similar experiments to the above were performed by one of the research scholars, Dr. J. S. RISIEN RUSSELL. He has carried out three researches. In the first, "afferent and efferent tracts of the cerebellum were interrupted"—that is to say, nerves were cut;—the second had to do with the reflex phenomenon known as the "knee-jerk." Here is what is said of the third:—

"The third investigation consisted in electrical excitation of the cervical and thoracic spinal nerve roots in order to ascertain the precise movements and positions of the head which resulted from direct and indirect action of muscles, the group of muscles thrown into contraction on excitation of any given root, and the total number of roots in which a given muscle is represented in the monkey."

Another research scholar, Dr. CARTWRIGHT WOOD, has been no more successful than his predecessors in elucidating the problem of vaccinia :—

"Dr. CARTWRIGHT WOOD states that in his last report he stated that the difficulties of working with vaccine, owing to the want of susceptibility of ordinary animals to the virus, has led him to attempt rendering such subject to the disease. For this purpose he placed animals under those constitutional and local conditions which are recognized as rendering animals more susceptible. The constitutional consisted in injecting the toxins of other germs at the same time as they were inoculated with the vaccine. By this means he was able to inoculate a rabbit with gonococcus material, as stated in his last report. The cultures and toxins of *B. prodigiosus*, *B. tuberculosis* (tuberculin), *B. malleus* (mallein), *B. diphtheriæ*, and other organisms have been experimented with on animals infected with vaccinia. The results obtained, although indicating clearly an increased susceptibility, have not yet been of a sufficiently definite character as to permit of their yet being used for experimental purposes. This he ascribes to not having yet found that special toxin which exerts this 'summative' action in the case of vaccinia, and accordingly he is experimenting with other substances."

After reading the record of the above in the pages of the *British Medical Journal*, we can estimate the value of the sentiment which animates that print in denouncing the wearing of aigrettes. That the fashion is a perfectly detestable one we have shown again and again in these pages; but it is not one whit more detestable than the laboratory sport on which the Association lavishes so much money every year. Nor need the Association imagine that the public will be deceived by this feeble attempt of its official organ to

"Compound for sins it is inclined to
By damning those it has no mind to."

HOME INTELLIGENCE.

LONDON.

THE HOME SECRETARY AND VIVISECTION.

On Sunday, August 9th, at a mass meeting held near the Chelsea Institute, it was resolved to again ask the Home Secretary to receive a working men's deputation to personally lay before him their view of the great danger to them of a license being granted to this institute. The following reply has been received from the Home Office to an application previously sent in :—

"Whitehall, Aug 10.

"Sir—With reference to your letter of the 31st ult., asking the Secretary of State to receive a deputation on the subject of the registration of the proposed Institute of Preventive Medicine for the performance of experiments on living animals, under the Act 39 and 40 Vict., cap. 77, I am directed by the Secretary of State to express regret that he cannot consent at present to receive the deputation in question.

"I am, Sir, your obedient servant,
"HENRY CUNYNGHAME."

INDIGNATION MEETING AT THE WORLD'S END.

On Thursday evening, July 30th, a public meeting was held at the World's End, West Chelsea, to protest against the

registering of the new Institute of Preventive Medicine, Chelsea Bridge, for the purpose of vivisection. The meeting numbered several hundreds, and a decided unanimity of feeling was shown.

Mr. FRANK SMITH, who presided, said they had met as ratepayers of Chelsea to protest against the registering of the building now erected at Chelsea Bridge. They were going to ask the Home Secretary not to give permission for the perpetration of cruelties which were so wicked that an ordinary brain must almost fail to comprehend them. (Hear, hear.) Chelsea ratepayers were against the registering on two grounds, and very serious grounds they were. In the first place, they would vehemently protest against these sickening cruelties on behalf of the dumb creation; and, in the second, they must regard the Institute, if registered, as a standing menace to Chelsea. (Hear, hear.) How could they, as a Christian people, stand idly by and see cold-blooded men ready to torture God's creatures without compunction? There was supposed to be a law in the land distinctly forbidding the ill-treatment of animals, and very rightly too. But they must, at least, make some show of consistency. The other day a poor costermonger was summoned because his donkey's collar had rubbed some hair off the animal's neck, and the Inspector of the Society for the Prevention of Cruelty was afraid that some pain or inconvenience must have resulted. But these doctors at Chelsea Bridge would go far beyond that. In their absurd efforts to fathom the unknowable, they would cut the donkey up alive, and would submit it to all the tortures that could be imagined. (Hear, hear.) Where was the consistency of summoning the coster for his petty offence and letting these doctors go free? (Applause.) He had mentioned two reasons which might be urged against the registering, but there was another. In the interests of the medical profession itself they would forbid these experiments. Was the man who would slowly crack the skull of an unfortunate dog, and then tie it down to see how long the exposed brain could remain active, the man to have the care of their wives and children? Emphatically no. (Hear, hear.) Those who could be guilty of such diabolical cruelty in the sight of heaven would fear nothing when dealing with human beings. (Hear, hear.) Let them make a protest that night which would show the Home Secretary what the people of Chelsea felt in the matter. He did not believe that the parishioners could stand by and see this iniquity commenced in their midst without a word of objection. (Applause.)

Miss LINDA PAGGI said they as anti-vivisectionists were often charged with sentimentalism. But she was prepared to argue the question from the common-sense point of view, and yet put their opponents to the worst in the encounter. The upholders of these diabolical experiments on poor, defenceless, dumb creatures were constantly telling the world that their aim was to reduce the suffering of humanity with the aid of the results attained in vivisection. But what had they done for the world? Their supposed wonderful results had in the mass been attained by other men with legitimate means, and not through the horrible sufferings of the brute creation. Vivisection, instead of being something with the glamour of novelty, was centuries old, and its chief characteristic had been the horrible and useless cruelty effected. She was talking to Dr. Bell Taylor a little while back, and that distinguished man said that at one time he would have liked to practise on animals. "And why not?" she asked. "Because," said Dr. Taylor, "I could never get used to the yells of the poor animals operated upon." Such a confession as that should induce everyone to pause and think. If a man who had seen a great deal of suffering was shocked, what would be the effect upon anyone else? (Hear, hear.) Miss Paggi quoted the articles which appeared in the *West London Press* eighteen months back in support of the case against vivisection, and concluded with an appeal to all present to be up and doing against the iniquitous business projected. (Applause.)

Dr. HAUGHTON said he had been asked to move the first resolution, "That this meeting of Chelsea ratepayers, believing that the practice of vivisection is immoral and useless, protests in the strongest possible manner against any licence being granted to allow such experiments in the neighbourhood." This was not the first time that he had spoken against vivisection and he hoped it would not be the last. He was as

anxious as any man for the advancement of medical science, but he denied that the performance of unspeakable horrors was the proper method for inquirers. (Hear, hear.) If one of the highly scientific gentlemen took hold of a dog in King's road, and proceeded to skin it alive, it would not be long before Chelsea people knocked his hat over his eyes. (Hear, hear.) Well, if such a thing was not to be allowed in one case in public, why permit the same iniquity in thousands of cases privately? "Oh," said the apologists, "medical science is in its infancy." Perhaps so, but it was evident that the people who practised in cold blood on God's suffering creatures were generally in their dotage. They were humbugs, and their business was to deceive and cajole the public. In several continental towns, where vivisection had been freely practised, there had been a great scarcity of the canine race. One wretch was reported to have destroyed 70,000 dogs after the animals had gone through tortures which made the blood run cold. They could, therefore, understand why so many people had suddenly lost the custody of their pets. By the way, Chelsea people would do well to keep their eyes on their dogs if the Pasteur establishment at Chelsea Bridge were opened. (Laughter.) Dogs and cats would suddenly disappear, and all inquiries at the Dogs' Home would be useless. (Hear, hear.) But this was not the only point. Were Chelsea people going to stand idly by and see this vivisection institute in full swing, with the germs of horrible diseases ready to escape and kill human beings, without protest? He hoped not. They would not be hoodwinked, despite the interesting stories of advancing medical science, and would let the Home Secretary know it in no uncertain manner. (Applause.)

Mr. R. S. Wood frankly said their object was to create a storm of indignation in Chelsea against the so-called Institute of Preventive Medicine, and to strengthen the hands of the Home Secretary, who had said that he would require the authorities of the Institute to make out a very strong case before he would license the Institute to carry out the sort of work they wanted to do. The Home Secretary, as indeed any Cabinet Minister, was after all only a servant of the public and when they could present such an enormously strong case against the Institute, then the Home Secretary would have to carry out the wishes of the large majority. He (the speaker) had noticed the callousness of the higher class of people in regard to the cruelties practised on living creatures. Whenever he talked with the poorer people, he always met with warm support. The vivisectionists said that the word "cruel" could not be applied to the experiments carried out by them in the cause of science. He entirely disagreed with that notion. Where pain was inflicted on any creature without benefiting that creature, then by all means it was cruelty to inflict that pain. Many experiments, such as freezing a dog to see at what degree of cold life became extinct, were simply carried out to satisfy a morbid curiosity. The people should rise to prevent their beautiful embankment being turned into a torture den, as it surely would be. He reminded them of the challenge which Dr. Haughton had given to anyone, to come forward and prove that vivisection had caused one single benefit to humanity. If you put an animal under chloroform and then experiment upon it, the experiment is of no use whatever, as the animal was not in a normal condition while under the influence of the chloroform. Wherever the Pasteur system had been established, he averred that hydrophobia was increased thereby. In order to gain real practical results, experiments must be made upon living human beings; but how are these people going to get people to experiment upon? Why, they would go to the hospitals, and under pretence of curing their diseases, they would inoculate their patients with some of their filthy compounds, and if they died, well they would be quietly buried and no more said about it. This sort of thing might happen at the new Institute on the Embankment if a licence were granted by the Home Secretary. They should band together and bring pressure to bear upon the authorities so that vivisection would be put an end to. (Applause.)

Mr. ARTHUR WESTCOTT then gave an account of what he saw while being conducted through the Pasteur Institute in Paris. A proper name for the new Institute on the Embankment would be the Institute of Inventive Medicine, instead of Preventive. They were making diseases, like the phrenologist

who could make the proper "bumps" appear on a person's head by means of a coal-hammer, if they were not there by nature. (Laughter.) The doctors would soon be going about with a bottle of inoculating physic and a squirt in their hands. (Laughter, and a slight interruption.) A much more needful Institute was a Sanitary Institute, where the laws of health could be properly taught, and the dwellings of the great majority of artisans would then become more wholesome and the people themselves better able to resist disease. (Loud applause.) The speaker next commented upon the muzzling order which had gone forth. This scare of mad dogs was something trumped up by the vivisectionists in order to give some countenance to their experiments.

MR. HUGH SHULVER, who had taken Mr. Smith's place in the chair, next put a resolution to the audience. Would they give their opinion on this matter of the new Institute? If so, let those who were not in favour of it and who were against vivisection, show it by holding up their hands. A good number present held up a hand, one gentleman calling out "They're all up, guv'nor." Mr. Shulver said he would request their secretary to forward a report of the meeting and the resolution to the Home Secretary.

Shortly after this the speakers withdrew. A few people stood talking in knots for some time after the meeting. The general idea seemed to be that most of them were horrified at the accounts which had been given about the experiments, and that they should be suppressed.

The Chelsea and Pimlico Protest Committee have presented, through Mrs. S. M. Benson, a Petition to the Home Secretary, containing eight thousand signatures, collected in a fortnight, against the licensing for vivisectional purposes of the British Institute of Preventive Medicine, on the Embankment, within their boundaries.

The following reply has been received:—"Whitehall, 12th August, 1896.—Madam,—With reference to your letter of the 6th instant, forwarding a Memorial from certain ratepayers and inhabitants of Chelsea and Pimlico, urging, for the reasons stated, that the building on the Chelsea Embankment, commonly known as the British Institute of Preventive Medicine, should not be registered under 39 and 40 Vic., cap. 77, I am directed by the Secretary of State to inform you that no application has been yet received from the British Institute of Preventive Medicine for the registration of the building in question, but that if such application is received he will not fail to consider most carefully the representations made by the Memorialists.

"I am, Madam, your obedient servant,

"HENRY CUNYNGHAME.

"Mrs. Benson, 35, Ebury Street, Pimlico."

The Chelsea Board of Guardians have resolved, on the motion of Messrs. Jeffery and Eddis, "That this Board do address a communication to the Home Secretary protesting against the proposed licensing of the British Institute of Preventive Medicine, near the Chelsea Bridge, for the purposes of vivisection, which this Board regards as unnecessary and cruel, and that the member of Parliament for the borough (Mr. C. A. Whitmore) be asked to support the Guardians' views in the matter."

BRACKNELL.

On Tuesday, July 21st, a meeting under the auspices of the Victoria Street Society, was held at Bracknell, Berks, where there reside over 100 adult members of the branch. The gathering was arranged by Mrs. Bowles, who, with her son, have been most energetic in spreading the cause and enlisting support. The Rev. Joseph Stratton, M.A., our staunch coadjutor at Wokingham, Berks., was to have journeyed over to take the chair, but at the last moment was unavoidably prevented by illness from attending; Mr. R. S. Wood, M.A., Oxon., the Organizing Secretary of the Branch, and Mr. Arthur Westcott, the working-man lecturer of the Society, were, however, in attendance, and in the Victoria Hall an excellent meeting was held in the evening, and largely attended. Stirring addresses were delivered by Mr. Westcott (who

presided), and Mr. Wood. Dr. Norman Davis spoke in favour of vivisection, and was replied to successfully by Mr. Westcott. At the close a resolution was adopted, with only three dissentients, calling for the total prohibition of vivisection by law. Much praise is due to Mrs. Bowles for her indefatigable efforts. A local committee will, it is hoped, soon be formed.

PECKHAM RYE.

On Sunday evening, 16th August, the South London Anti-Vivisection Society held an open-air meeting on Peckham Rye, when Miss Jessie Craigen was the speaker. Her forcible utterances not only rapidly drew a crowd of nearly two hundred attentive, earnest listeners, but when she put a powerfully-worded resolution, for the total abolition of vivisection, it was carried without one dissentient voice.

WESTON-SUPER-MARE.

Under the title of "Experiments on Living Animals and Living Men," a lecture was given on Thursday evening, July 30th, at the Young Men's Christian Association, Weston-super-Mare, by Mr. T. A. Williams, of Bristol. The chair was taken by Arthur Smith, Esq. In the course of an interesting address, the lecturer said that so great was the importance to the public of the vivisection question, that people who ignored it were enemies to themselves. Of what use were the experiments of Professor Lloyd Morgan, recorded in *Nature*, performed for the purpose of inducing scorpions to commit suicide? Vivisection, he contended, was cruel, and therefore could not be for the moral good of mankind. The assumptions of science, based upon vivisection experiments, had a tendency to foster a false confidence by leading people to imagine that it would provide substitutes for the observance of those moral laws on which health is dependent. There was, he asserted, evidence that diseases such as vivisection doctors claimed to elucidate and cure, were on the increase, twenty thousand persons dying annually of cancer in this country, while diseases which were amenable to moral and sanitary law had decreased. In referring to the growing danger of human experimentation, especially in hospitals, a well-known vivisector had said that a human life was nothing in comparison with the discovery of a new fact.—The CHAIRMAN observed that though we could not now bring out our sick to be healed by Christ, there were still those who had sufficient faith not to do what was morally wrong for the sake of some supposed material advantage. Death was not so much to be dreaded as the extinction of the higher sensibilities of our nature.—Mr. JOHNSON (of Lincoln) said he had sat somewhat at the feet of Miss Cobbe, but the present lecture had increased his knowledge of this important subject, which he should try to make known in his own neighbourhood. He proposed the following resolution, which was carried unanimously:—"That this meeting is of opinion that the practice of vivisection is cruel; that many high medical authorities hold it to be useless; that it tends to endanger hospital patients, and that it should be abolished by law."

WHITBY.

The Rev. Samuel Pearson, M.A., of Manchester, preaching to a crowded congregation, at the Congregational Church, Whitby, on Sunday evening, August 9th, from the text, "There is no speech nor language—their voice is not heard," dwelt, in the course of an impressive discourse, on the survival of the fittest,—a fact in nature, he said, which cannot be ignored—but pointed out that it was just there where Christ came in. He never broke the bruised reed, His work was to bind up, heal and strengthen. We could not conceive of Christ as working a maxim gun. We could not conceive of Christ as using the knife of the vivisector.

THE SCOTTISH SOCIETY.

At Rutherglen, on Sunday afternoon, August 9th, Colonel Waterston, Secretary, delivered a lecture in the Congregational Church, there being a good attendance. On Sunday evening, August 16th, Colonel Waterston lectured in the Albion Street Church, Aberdeen; and on the 23rd in the Evangelical Union Church, Dalkeith. Literature was given out on each occasion.

OUR CAUSE IN THE PRESS.

DIPHTHERIA.—"SALUS POPULI SUPREMA LEX."

(FROM THE "PALL MALL GAZETTE," JULY 27TH.)

SIR,—Your "Science Note" of the 20th has only just come under my observation. The motto which heads this letter may be taken to be the best reply to the writer's statement that it is only "professional etiquette" against "entering upon newspaper controversies" which prevents those who could with authority reply to my article on "The Anti-toxin Treatment of Diphtheria" in this month's *Contemporary* from doing so.

It would appear that we are to be allowed popular or semi-popular lectures at the Royal Institution and elsewhere in favour of the treatment; the daily papers may print lengthy abstracts of reports signed by the medical superintendents of our Asylums Board hospitals; they may contain leaders for or against it by anonymous writers, and they may even quote the *Lancet*. Signed letters may be written by either (medically) unqualified correspondents, or by those presumably medically qualified, so long as their communications are identified only by cabalistic letters; but "etiquette" is to prevent any adverse criticism or a reply to any adverse criticism when the full name of the writer is appended, albeit that by this means alone can the general reader gauge whether the words uttered have any measure of authority, or are simply expressive of premature damnation by one of "a crew of irresponsible outsiders."

Permit me to criticise my critic. He assumes that anti-toxin "is admittedly the only scientific mode of treatment." In what respect is it scientific? We do not at present know the exact constitution of either toxin or anti-toxin; we have no power of controlling the very variable resistance of the horses we attempt to immunize, nor have we any guide to dosage except the crude one of severity of the case, an element of such uncertainty that at no stage of the disease, nor by any statistics, can it be determined. Your critic asserts that "there is no doubt that it (anti-toxin) has cured an enormous number of cases of diphtheria." The report of the Metropolitan Asylums Board shows that the mortality in over 2,000 cases with the treatment in 1895 was practically no less than the previous year, only 2 per cent. less than the average of nearly 12,000 cases for the previous seven years, and actually in excess of the results frequently obtained by the older methods at individual hospitals of the same series. On the other hand, in the same year the mortality in nearly 1,400 cases treated without anti-toxin was less than one-half of that obtained with it, and, moreover, this improved result was to be markedly observed in infant cases, the test class of any treatment of diphtheria.

Finally, with regard to laryngeal cases requiring the operation of tracheotomy, the results with anti-toxin, although greatly better than those previously obtained *en masse* without, were identically at one with the records for three previous years by one of the superintendents—of course before anti-toxin was introduced (*Lancet*, August 11th, 1894).

Your critic agrees with the *Lancet* that the reason which has been "mainly operative" in contributing towards an impression of distrust of the efficacy of anti-toxin in this country is, to quote from the original, "the simple fact of insufficient dosage," but as I have pointed out in the *Lancet* of the current week, "the mortality during the later period of 1895 was twice as great as that in the earlier, and it was during this period that the supposed advantages of larger doses were accepted and enforced."

Your Science-Noter admits that "the treatment is still in its infancy," and I am still open to conviction as to its value. I am only opposed to a forcing of it on our acceptance by the bestowal of a precocious adult maturity.

I gratefully note that as a result of my protests the triumphal march of anti-toxin is being taken each day with slower and more cautious steps. Of this policy your contributor affords a striking example.—Yours faithfully,

London, July 24th.

LENNOX BROWNE.

EXISTING LEGISLATION AND THE ADVANCE OF PUBLIC SENTIMENT AS TO ANIMAL SUFFERING.

On the 10th of July the *Times* had a remarkable article on this subject, *à propos* of a then recent abortive prosecution of Great Eastern Railway officials for cruelty in loading and unloading animals in transit over the Company's line. We make the following extract, which will, we feel sure, prove to be in entire harmony with the feelings of our readers on the subject:—

"It is just such a case as this which reminds one that legislation does not always keep pace with the public conscience. It would be no difficult task to show that the principal statutes dealing with this matter and the construction put upon them belong to an earlier state of public feeling than the present; a state of feeling much more obtuse to suffering and more tolerant of gross indifference to the fate of the lower animals than right-thinking people nowadays would care to avow. Carelessness, though resulting in the torture of an animal, if not accompanied by intentional cruelty, is apt to be condoned. No true sportsman who had wounded a deer would, if he could help it, leave it to die slowly on the hill or in the forest in which it had been shot; he would feel bound to spare no pains to follow it, even after night fell, to put it out of its agonies. A prosecution of a person who had wounded some domestic animal and left it to die slowly might end in an acquittal. Often when downright cruelty has been brought home to an accused he escapes because his victim is not a domestic animal. 'Cruelty,' we are told on high authority, 'means something more than inconvenience'; and this excellent maxim, it is to be feared, serves to palliate conduct which, if the subject of it were the meanest human being, would be punished as cruelty of a very odious character. Aristotle will have it that 'towards any lifeless thing friendship and justice are out of the question,' adding 'the same rule holds good with regard to a man's horse or his ox.' This idea is not quite extinct. Society has been slow to believe that the lower animals, even those upon which we are most dependent, have their rights. But of late this belief has been rapidly spreading, thanks in no small degree to the sharp lessons occasionally administered to delinquents in the police-courts*; and we are nearing a time when the notion that a horse or an ox is to be regarded as merely a tool to carry out man's designs will be as obsolete as the notion, also put forward in this connection by 'the master of those who know,' that friendship to a slave is impossible, and that a slave is only superior to a tool in that he has the function of life. The change going on in feeling on this subject must in the end affect legislation, and remove the anomalies to which we have adverted."

THE TEST OF RABIES BY AUTOPSY AND INOCULATION.

Mr. F. E. Pirkis, Hon. Treasurer of the National Canine Defence League, has issued the following:—

"The test of rabies, by autopsy or by inoculation, is at the present moment being largely called in question, alike by medical and veterinary experts.

"Dr. Berdoe, M.R.C.S., writes in *The Manchester Weekly Times*, of July 3rd, 1896:—"I know nothing so unscientific as the scientific jargon talked and written about the pathology of rabies and hydrophobia. Captain Pirkis is more than justified in saying that 'Veterinary surgeons doubt the utility of the autopsy of animals suspected of rabies.' We know no more to-day of the true anatomical characters connected with rabies than we did before Pasteur commenced his researches. If we refer to the article 'Rabies' in Quain's great Dictionary of Medicine (1st edition, 1883), we find it stated that 'There are no *post-mortem* signs sufficiently trustworthy or characteristic to enable us to form a correct diagnosis of rabies.' Under the head of 'Anatomical Characters of Rabies,' the author uses the words 'may

be' eight times. For example, 'the tonsils may be enlarged,' 'the mucous membrane may be swollen,' 'the glands may be found enlarged,' and so on. Then the words 'usually,' 'generally,' 'frequently,' 'sometimes,' 'as a rule,' recur again and again, till at the end of one's study of the matter the impression left on the reader's mind is that nothing definite is known about it. And Pasteur has practically left the subject where he found it; yet from time to time we read that a veterinary surgeon, having made a *post-mortem* examination of the suspected animal, has declared it to have been the subject of rabies."

"The views thus clearly stated by Dr. Berdoe have again and again been freely expressed by the leading members of the veterinary profession. Dr. Fleming, the eminent veterinary practitioner, asserts that 'it is next to impossible to pronounce with certainty whether a dog which has been killed for rabies was really rabid.' Professor McFadyean, Dean of the Royal Veterinary College, London, states that 'an ordinary *post-mortem* never warrants a positive diagnosis in suspected rabies;' a statement in which he is supported by such well-known veterinary authorities as Professor Atkinson and Messrs. Woodroffe Hill and Rotherham.

"The test by inoculation, i.e. the throwing of the virus of the (supposed) rabid animal direct upon the brain of a rabbit or other animal by the cruel process known as 'trephining,' has been similarly impugned. So far back as the year 1889 it was called in question, when a herd of deer at Ickworth Park was attacked by disease, and two hundred animals died. Professor Roy, employing this test, gave the opinion that the malady was rabies, but the Veterinary Department of the Board of Agriculture, after resorting to similar tests, reported that 'the true nature of the affection remained doubtful.'

"This test has again and again been pronounced fallacious by English, French, German and American experts, among whom may be mentioned Dr. Dolan (who inspected and reported on the Pasteur Institute at Paris); Professor Galtier, of Lyons; Professor Von Frisch, of Vienna; Professor Spitzka, of New York; and Professor Herman Biggs, of the Carnegie Laboratory, who has not hesitated to assert that, although the inoculated rabbit may die, there are no characteristic signs of rabies present, 'the symptoms being only those of a general paralysis.'

"Mr. Maurice Johnson, a gentleman who has given much time and thought to the study of the subject, gives logical and scientific reasons for the failure of the inoculation test as such, in a letter to *The Echo*, of July 10th, as follows:—

"The paralytic and other morbid nervous symptoms which ensue when the supposed rabies virus is thrown in contact with the surface of the brain of an animal, by trephining, are such as would result from the introduction of foreign matter by the same method, and are, consequently, no evidence that the dog from which the matter was taken was rabid.

"The misleading nature of such a test seems self-evident, for the contact of any foreign matter with an organ so delicate as the brain (the structure of its tissue being more exquisite than frost-work or the petal of the most ephemeral flower), must necessarily induce the most confusing symptoms. The irritation set up in any point of the cerebral cortex by the presence of foreign matter, would, of course, speedily induce sub-acute inflammation, resulting in slow disorganisation and sloughing of the brain structure, the result being delirium and spasms, and convulsions of the bodily organs whose nervous centres are in a state of inflammatory disintegration. The question is such a serious one as to demand the immediate attention of the authorities concerned, and so long as a futile and misleading method of diagnosis is employed the rabies scare, which has so long been terrorising the public, will unavoidably increase and extend."

"When it is taken into consideration that the accuracy of the returns as to the increase of rabies in this country depends upon the *absolute infallibility* of the rabies' test, it will be seen that the subject is one of very grave importance, and the National Canine Defence League appeals most earnestly to every dog-owner in the Kingdom to join heartily in the protest at present being made against the unscientific and utterly inconclusive test which proclaims us to be living in the midst of diseased and dangerous animals."

* QUERV.—May not the education of public opinion by the many and various humane agencies have had also a good deal to do with the matter?

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Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 6.]

LONDON, OCTOBER 1, 1896.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

IN the House of Commons, on August 6th, Mr. Tritton presented a petition from inhabitants of Brighton and other places praying for the total prohibition of vivisection.

FAME, to be of any value, should be enduring. In France its duration is short, for there it is often commemorated by the name of the famed being appropriated to some street. When the fame of the famous has waned—as it sometimes seems to have in France a knack of quickly doing—the name is taken down and replaced by a newer one. Thus the Boulevard de Vaugirard in Paris has just given place in name to the Boulevard Pasteur. By-and-by, and rather sooner than later, Pasteur will be forgotten, or despised, or both, and then his name—which is only on "part" of the Boulevard after all—will be changed for some newer notoriety. *Sic transit gloria mundi.*

THE name of Mrs. Mallet was accidentally omitted from the report in our last issue of the brilliant speaking

of our allies and representatives at the Buda-Pesth Congress. A correspondent who was present on the occasion, and well acquainted with the German language, writes as follows:—

"What Mrs. Mallet said was not only admirable in itself; but, being delivered in German, and coming immediately after the most able speeches delivered in defence of vivisection, it made (as far as I could judge) the greatest impression of anything that was said by English or American delegates, excellent as was the matter of their speeches."

Those who have heard Mrs. Mallet speak on our platform in London will recognize the eloquence of her addresses.

It is now claimed, as reported in the *Lancet* of September 12th, that the bacillus of rabies has really been found. It came to light in the laboratory of Parasitology, etc., in Turin. As this bacillus has thus been discovered in 1896, it is evident that Pasteur must have blundered when he said he discovered it in 1881. Indeed, it is generally admitted that he did. Yet, out of this blunder, the whole structure of the Pasteurian theory as to hydrophobia and its treatment has grown. Dr. Bruschetti, the new discoverer, has already distinguished himself by experimenting on five hundred dogs and rabbits, and has now gone to Paris to continue his revolting diversion there.

THE total number of those whom the Pasteurian treatment has failed to save from death—some of them having been killed by it—now amounts to 313 persons. This is a large total, but it must not for all that be taken that it is exhaustive. Many cases of death occur, no doubt, which are not reported in England. For instance, in the current year an official report has been published by Drs. L. de Blasi and G. Russo Travali, in charge of the Anti-rabic Institute at Palermo, giving particulars (copied by us on another page), of nineteen fatalities after Pasteurian treatment, between 1887 and 1896. Of none of these had we heard before. In addition to these, three more recent cases have been chronicled, which also we republish. Thus the grand total of the deluded victims of Pasteurism has been increased at a bound by twenty-two cases, all properly authenticated. And yet we lately found Sir Joseph Lister pleading that the average mortality of cases treated had been reduced almost to zero. It is true the Pasteurian authorities by manipulation have so reduced the mortality on paper; but the facts we publish, and the practice of treating almost all comers, show how delusive are the grounds on which the claim to success for the system are based.

SPEAKING of Sir Joseph Lister's address at Liverpool,

the *Manchester Courier* (September 17th), made the following amusing observations:—

"Sir Joseph Lister is such a believer in Pasteur that he believes in his cure for hydrophobia, which a great many people regard as dangerous. He believes that even tetanus, the cause of which is deep-seated in wounds, can be prevented, it being due to a microbe; and that a perfect security may be set up against snake-bite by a judicious inoculation with the poison. The whole address is very fascinating and consoling, but we can hardly call it soothing. As we realize what Sir Joseph Lister wishes to impress upon us, we seem to lose our own individuality. A human being is no longer himself; he is some millions of other creatures preying upon one another. He is not an individuality, but a war. He is innumerable armies, all of which are engaged in what Captain Marryat would have termed "triangular duels." The idealistic notion of Man ceases to be of any effect if it be true that he is only some infinite millions of almost indistinguishable bacilli battling with one another. The worst of it is that we cannot meet the enemy in the open. We feel as impotent before Sir Joseph Lister's microbes as before—well, the Sultan of Turkey."

MR. ERNEST ABRAHAM HART having set himself up as the great paragon of medical deportment—the Turveydrop of medicine, as he has been called—it is quite natural that the British Medical Association, which he rules from the editorial chair of its *Journal*, should develop a Section devoted entirely to the elucidation of questions of medical behaviour or "medical ethics," as its new patrons are pleased to term it, and accordingly this new Section appeared in full operation at the recent meeting at Carlisle.

ALAS for the vanity of human wishes! The efforts there made to enhance the dignity of medical deportment called forth this distressing remark in the *North British Daily Mail* of August 1st—

"It is rather humiliating to have to say that the outstanding feature of the concluding day's work was a 'scene,' which took place in the 'ethics' section when the subject of professional men advertising their qualifications to the public was under review."

In sad truth, a more unmannerly discussion of manners has seldom, if ever, been witnessed before. We note that the public press contains a much fuller account of these proceedings than any which has appeared in the medical journals.

DR. BRUCE, of Dingwall, spoke of quackery outside the profession, and advertising inside the profession in high and low places, and discussed the means of putting down the latter. One was through the agency of Branches of the Association; another means suggested was boycotting. Dr. Broadbent, of Manchester, traced an intimate relationship between quackery and advertising, defining quackery as making "a noise or bluster like a goose." To this category he referred nearly every crime in the professional calendar. Dr. Kingsbury, of Blackpool, so far from having his feelings assuaged by winning his law-suit against Mr. Ernest Hart, who had charged him in his journal with unprofessional conduct, wished to relieve his mind further by a few "dispassionate remarks" on the subject. He didn't get far, however, and was about to tell of something that happened when he went from Ireland to Lancashire—when he was cut short by Dr. Lovel Drage (Hatfield), who wanted to know if he was in order. Dr. Kingsbury was allowed to proceed, with a caution, but before he could say anything there were further inter-

ruption and loud expressions of dissent. Eventually Dr. Kingsbury got out that in the *British Medical Journal* of the date of the meeting there was an advertisement of a Hydropathic Establishment at Matlock, giving the name of the doctor, with all particulars, including his fees at his residence and at the establishment. Dr. Hardman (Blackpool) made a statement, which Dr. Kingsbury flatly contradicted, whereupon "a member in the middle of the room said he was entitled to give another member the lie as one member had done."

DR. HARDMAN at last got hold of the meeting, and in spite of elegant cries of "No, no!" and "Shut up!" succeeded in saying something. He mentioned the sale of a worthless pill by dint of advertising, and then the following colloquy took place, which put the situation in a nutshell—

"The CHAIRMAN (Dr. I'Anson, of Whitehaven): This is beside our profession.

"Dr. HARDMAN: *Our profession has a trade aspect.*

"The CHAIRMAN: It has no trade aspect. *We must not consider we have.* ('Hear, hear,' and a voice at the back of the room—'You have done well, sir.'")

Exactly—a noble profession trying to frame trades-union rules and imagining that by the simple device of calling them "ethics" they get rid of the trade element! Dr. Hardman is quite right about the trade aspect, and the Chairman and his backers purely Pecksniffian in their attempts to shut their eyes and the eyes of others to the fact.

IN the *Medical Record* of New York (June 30th, 1896), is published the paper by Dr. Joseph E. Winter, read before the New York Academy of Medicine, May 21st, on the anti-toxin treatment of diphtheria, in which the writer strongly corroborates, from independent investigations, the conclusions arrived at by Dr. Lennox Browne. In addition to the fatal effects of the injection in the case of W. Langerhans's boy, and of Miss Valentine, of Brooklyn, Dr. Winter cites six other cases in which the same result followed from "preventive" injections, or injections in doubtful cases. A large number of other cases are cited in which injurious effects short of death ensued from its use.

DR. WINTER's conclusion is exceedingly weighty. He says, disclaiming a charge of prejudice which had been brought against him:—

"If there is a specific for diphtheria, I want it; no member of this academy, no member of the profession in any portion of the world needs it more than I do; and every man who knows me knows that it would not be possible for me to cast a word of doubt on any remedy which could be of the least possible use in the treatment of diphtheria. I could not possibly have brought myself to the position in which I find myself to-night had it not been for my strong conviction regarding the injurious effects of anti-toxin. Could I have found that anti-toxin did not do any harm, even though it was valueless in the treatment of diphtheria—even though it did not reduce the mortality—I would never have said anything against it. It is because I believe that it is dangerous that my convictions compel me to speak. The time will come, gentlemen, when every member of this academy will feel with reference to it as I do to-night. You will come to it from conviction, as various members have already."

THE *Monthly Magazine of Pharmacy* quotes Dr. Beebe as saying:—

"One qualification for the practice of surgery which a

great many men lack is sympathy, or consideration for the comfort of patients. It would be of incalculable advantage to suffering humanity if every man or woman who goes out to practise on the sick could be first made to serve as a patient in some of our public hospitals for a few weeks. It would shed new light on the ways to avoid pain or even discomfort." But would it not put an end to "dying scientifically?"

THE *Boston Medical Journal* says that "doctors should not wear beards. There are bacteriological reasons against it." But the same objection applies to clothes. The *Monthly Magazine of Pharmacy*, commenting on the subject, says:—

"We are not sure whether there would be any risk about gold spectacles and an umbrella, but this is as far as they should go if they conscientiously consider the duty they owe to their patients upon bacteriological grounds."

By the way, what did microbes do for a living before they became fashionable?

THE goat has been considered proof against the effects of tuberculosis. But a German professor of Berlin, after a long course of experiments, has at last succeeded in inoculating it with the disease. Some persons of a practical turn of mind may be inclined to ask what particular advantage this discovery will be to humanity? But who could expect a scientist of this class to trouble himself with such a sordid question?

DR. J. N. LANGLEY, in a paper on "Nerve Cells," in the *Journal of Physiology* (vol. xx., p. 223, 1896), records certain experiments with nicotine on various animals whose abdomens he had opened. He says (p. 224):—"In the cat and dog the reaction of the splanchnic [nerve] fibres to nicotine is not the same as it is in the rabbit." Here, then, is evidence of an important character regarding the futility of experimenting with drugs on animals for assisting the physician to learn their action upon man. You cannot argue from dog to man, because dog physiology is not precisely human physiology; nor can you argue from rabbit to dog, because it seems that each species of animals has its own special physiology, although Mr. Langley says rather illogically, "it seems to me most unlikely that what holds for one animal, will not hold for the rest."

A DISEASE that is not of bacterial origin is not worth having in these microbic days. As rheumatic-gout is one of our commonest complaints it seemed shabby of our researchers not to provide it with its microbe. This neglect has now been remedied. The *Practitioner*, however, says that "the crucial test of the production of the disease in animals by inoculation with the micro-organism has not yet been fully worked out." But it will be, of course, and then we must salute the *débutant* when duly presented at the College of Physicians.

WHEN an alkali such as carbonate of soda is experimentally injected into the blood of an animal it lessens or even arrests the secretion of mucus from the wind-pipe. Now, in medical practice the use of alkalis is found to increase the amount of secretion, and they are regularly employed by physicians for the purpose of aiding the expectoration in bronchitis. Dr. Lauder Brunton, in his *Pharmacology and Therapeutics*, admits this contradiction in teaching (p. 216), and says: "The results of

clinical observation are quite as certain as those of Rossbach's experiments." If this were the only instance of the futility of testing medicines intended for human beings on animals and by laboratory experiments, it would suffice to invalidate the claims of the vivisectionists.

DR. JAMES CALVERT has a paper in the *Journal of Physiology* (vol. xx., p. 158, 1896) on this question of the tracheal secretion. He tells how Rossbach performed his experiments. "He cut down upon the trachea [windpipe] in the middle line, opened it by means of the galvano cautery [*i.e.*, burned it through with a red-hot wire], and held it widely open so as to secure a good view of its mucous membrane." He then injected various drugs into the circulation to test their effect upon the secretion, and, as we have seen, came to a conclusion about the action of alkalis thereon exactly opposite to the experience of physicians. Dr. Calvert is not satisfied as to this diversity of action, and says:—"It was this conflict between experiment and clinical experience which drew my attention to the subject, and I have repeated some of Rossbach's experiments and done others on similar lines." Dr. Calvert's conclusion is that Rossbach was entirely wrong; he is "diametrically opposed" to Rossbach, and the physicians are right after all. How absurd it all is!

ROSSBACH, says Dr. Calvert, "seems to have used no anæsthetics." As any struggling of the animal would surely affect the amount of secretion from the trachea, Dr. Calvert employed urethane, "a drug which does not affect the heart and circulation" (a plain admission that chloroform has this disturbing effect). "Morphine," he tells us, "is known to check secretion from the respiratory mucous membrane." Whether anæsthetics or other pain-easing drugs be employed in laboratory experiments or not, it is impossible to avoid results which vitiate them for any real scientific purpose. In the same number of the *Journal*, Mr. Pickering says (p. 167), concerning his experiments on the embryonic heart:—"Further, the anæsthetic given to the mother would probably affect the embryos by diffusion through the foetal circulation, and thus vitiate the results."

OUR CAUSE IN THE PRESS.

THE PASTEUR TREATMENT AND HYDROPHOBIA.

(FROM THE "PALL MALL GAZETTE," SEPTEMBER 2ND.)

SIR,—As I know the Pasteur Institute at Paris and am familiar with the treatment of hydrophobia and rabies, I read "The Experiences of a Pasteur Patient" with more than ordinary interest. It is a curious and significant fact that the advocates of M. Pasteur's prophylactic treatment tell us a good deal about the rabbits sacrificed in the process, but never a word about the dogs. The rabbits suffer in silence, and do not impress the visitor, who is taken over the establishments in the Rue Dutot, to anything like the same extent as do the cages of dogs who fill the air with their cries and shake the bars of their prison in their efforts to escape. I saw a dozen beautiful dogs who had been rendered artificially rabid as a necessary part of the experimental or regular treatment of the animals employed in the preparation of the virus. Mr. Cooper makes many very important admissions which, in my opinion, seriously invalidate the claims made on behalf of the system. He very properly says: "It is not curative, for nothing may cure hydrophobia; it is preventive only." And then he gives us statistics. But how in the name of all that is scientific can a preventive treatment be the subject of statistics? The

logical fallacy, "*Post hoc, ergo propter hoc*," is seen in all its grotesqueness in the statistics of the Pasteur Institute. Bearing in mind Mr. Cooper's admission that nobody attempts to cure hydrophobia at the Pasteur Institute, the statistics tumble down like a house of cards at a breath of wind. Hundreds of cases of "dog-bite" are treated daily at our hospitals with a dab of caustic. In most cases nothing is known of the history of the biting animal, and seldom is any record kept of the case, except the name of the patient on the casualty sheet. Perhaps once in 10,000 instances the bitten person may return for treatment of hydrophobia: would the hospital people be justified in stating in their report that they had prevented 9,999 patients from dying of hydrophobia? "The Institute," says Mr. Cooper, "refuses no case in which there is any suspicion of rabies." With excitable people like the French, and with all the stir and alarm fostered by the Pasteur treatment, patients crowd the waiting-rooms in the Rue Dutot, with or without the slightest reason for suspecting danger. I saw a young doctor from India inoculated there who told me himself that a suspected dog had bitten the heel of his boot, and as he wanted a holiday he availed himself of a chance of seeing Paris. I put no faith in the experimental inoculations of Class A, because M. Vulpian injected under the skin of rabbits saliva collected at the very moment of the experiment from perfectly healthy individuals, and this injection killed the rabbits so inoculated in forty-eight hours (*British Medical Journal*, April 9th, 1881, p. 571). The veterinary certificate of Class B fails to convince me, because I know it is impossible for any vet. to tell from the most carefully conducted examination of the dead body of a dog whether the creature has suffered from rabies or not. The "strong reason to believe that rabies existed" of Class C usually arises merely in the excited imaginations of the bitten person and his friends, and can be only of the faintest scientific value. The only statistics of any real worth would be a reduced death-rate from hydrophobia in France itself, where the Pasteur system has been thoroughly tried. So far from any good effect in that country having resulted from the treatment, we know that it has undoubtedly led to the increase of hystero-epilepsy, a disease singularly like hydrophobia, and I know of no country in which the inoculations have reduced the mortality from hydrophobia. When I visited the laboratories of the Paris Institute I certainly saw a number of uncovered zinc pails partly filled with broken culture-glasses, containing waste materials of pathogenic character, which were open to the visits of any busy, curious, thirsty flies with a taste for disease germs, and I remarked at the time that this seemed to be a source of danger. There is, therefore, some basis for the assertions which Mr. Cooper characterizes as ignorant, or due to fertility of imagination.—I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

THE GOVERNMENT AND VIVISECTION.

(FROM THE "ECHO," LONDON, AUGUST 25TH.)

SIR,—Certainly the present Government would seem to be doing its best to play away the magnificent majority with which it came into power; it has displeased friends and enemies alike; it has almost appeared to go out of its way to do so, and one of its last acts has been an exaggeration of an error committed either from stupidity or *finesse* by its predecessor. Up to the year 1895, much as successive Home Secretaries had smiled on vivisection, and had tacitly carried out the vivisectionists' interpretation of the law supposed to control them, the returns of the inspector of vivisection had nevertheless been published in time to be discussed, while still the various anti-vivisection societies were holding their annual meetings, and many weeks before the end of the Session. In 1895, however, during the reign at the Home Office of Mr. Asquith, the inspector was allowed to get so much in arrears with his report that the said annual meetings were all over by the time it appeared. Thus the report escaped the unpleasant handling and unveiling it generally met with at those meetings, though there still remained time for questions in Parliament. It has, however, been left to this Government to keep back the report till a few days before the rising of the House, thus rendering any question impossible for this Session. The excuse put forward

for this was somewhat absurd. The Irish vivisectionists, it was stated, had not sent in their returns. Twenty-eight experiments took place in Ireland, against 4,679 in Great Britain, and yet we are asked to believe that these twenty-eight experiments blocked the way. If they did, it was a blocking that a couple of words from head-quarters could have summarily disposed of. But on looking over the report on vivisection for 1895, I am not at all surprised these words were not spoken; no doubt it would have been very awkward had the report been published while there was still time for public examination of it, and for questions in the House. That this opinion is not a solitary one is evident from a sentence in the *British Medical Journal* of August 22nd. This out-and-out advocate of vivisection in *excelsis* admits that the report "shows that the Act under which the return is made does not, perhaps, check scientific investigation so much as might be feared," and speaks of the "level-headed sanity" of the Government in virtually playing into the hands of the vivisectionists. It is as well this organ of the laboratory has at last openly confessed that the anti-vivisectionists are correct in saying that vivisection is virtually unrestricted in England, and that in the face of an Act on the Statute-Book, in the face of taxation raised for working it, in the face of a strong and growing popular disgust of the practice, the Government does its level best to foster a state of things which is a danger to health and a disgrace to humanity. Finally, it is not ashamed, so long as by doing so vivisectionists may be aided and sheltered, to put forward an excuse which, if real, would only prove its own incapacity. That I am not by political policy an opponent of the Government is vouched for by my signature; but what is morally wrong can never be politically right.—Yours, etc.

A UNIONIST.

THE PERILS OF CHLOROFORM.

(FROM THE "PALL MALL GAZETTE," SEPTEMBER 22ND.)

SIR,—Physiologists tell us that doses of drugs vary in their effect according to the amount given per pound of body weight, whether animal or human, and generally this is true. Notwithstanding the fact that in the Hyderabad Chloroform Commission four hundred and ninety dogs, horses, monkeys, goats, cats, and rabbits were used—and as Dr. Lauder Brunton telegraphed from Hyderabad there were made numerous observations on every individual animal—the question of dose for a human being is not even yet settled. Dr. Robert Bell tells us in your columns that only "18 minims at most are sufficient, when slowly and progressively absorbed in the course of about four or five minutes, for inducing normal and harmless anæsthesia in an adult of average size and health." I have given, and witnessed the administration of chloroform hundreds of times, but I have never seen so small a quantity as 18 minims of the drug produce complete anæsthesia in an adult. I do not dispute the matter, but I say that the practice is to use very much larger quantities, and I cannot understand why such are employed if they are unnecessary. My point, however, is that if experiments on the lower animals are of any value to physicians at all, surely this question of dosage of chloroform is the one of all others which we might expect them to settle. Yet we find so eminent an authority on anæsthetics as the late Mr. Clover, in his article on anæsthetics in Quain's "*Dictionary of Medicine*," telling us to give a drachm to a drachm and a half of chloroform to begin with, and follow up with half-drachm doses as they become necessary. Mr. Clover was a most cautious and successful anæsthetist, and I cannot imagine why he employed such quantities if Dr. Bell's doses suffice. Reverting in memory to my dresser days, when assisting in the operating theatre, I can imagine the impatience of the surgeons with the chloroformist who should have tried to get a patient off with eighteen drops of chloroform. Doubtless one reason why experiments on animals have not settled the dosage question is the fact that the animals were mostly healthy and our patients usually diseased. Dr. Lauder Brunton, in his telegram published in the *Lancet*, 5th December, 1889, said: "Danger from chloroform is asphyxia or overdose. None whatever heart direct." But this was not accepted by our English anæsthetists, one of whom—Mr. Silk, of Guy's Hospital—said (*Lancet*, February 22nd, 1890): "I

cannot possibly admit that any number of experiments on animals ought to outweigh the results of prolonged clinical experience." If 18 minims of chloroform are sufficient to produce anæsthesia in an adult, it is criminal to give more. The point is, Are 18 minims sufficient? In my humble opinion they would usually be found useless for the purpose.—I am, Sir, yours, etc.

September 17th.

EDWARD BERDOE, M.R.C.S.

SCIENCE AND CIVILISATION.

(FROM THE "ECHO," LONDON, SEPTEMBER 4TH)

SIR,—Surely the *Lancet* is unwise in writing, in its issue of August 29th, as follows:—"The Ohio State Medical Society has lately passed important resolutions in order to make a decided stand against the growth and influence of that fanatical and inconsistent sect, the anti-vivisectionists. We sincerely hope that this medical association will be able to effectively hold its own and prevent the passing of laws which tend to retard science and civilization." Considering the last accounts we had of vivisectioners in Ohio, it seems to me the *Lancet* would do well to be silent on this subject—the vivisectioners of Ohio are, indeed, pioneers, they thirst for knowledge at all costs, they are out-and-out consistent, and, therefore, the last news we had of their doings was that one D. Pyle had tried to pass a bill through the Ohio Legislature by which the vivisection of criminals was to be legalised, and that this bill was backed by clergymen and doctors of medicine. Fortunately the anti-vivisection feeling in the Legislature was sufficiently strong to put a stop to these advanced methods becoming law, and very possibly it is in view of these daring proceedings of the vivisectioning party that the anti-vivisectioners of Ohio are comporting themselves in a manner which has vexed the soul of the *Lancet*. But surely the *Lancet* will hardly confess that it regrets this anti-vivisectional victory in the Ohio Legislature? Undoubtedly if it does not wish, either in Ohio or England (and if in one, then sooner or later in the other), to see State-sanctioned laboratories set up where properly qualified men may carry on researches on the living human subject, then it should, if it wishes to be consistent, give its support, not to the vivisectioners of Ohio, but to the anti-vivisectioners, and what is true in this matter with regard to the *Lancet* is true also with regard to the Ohio State Medical Society. But whatever may be the views of the *Lancet*, it is important that we, the public, should remember that it has never in its columns expressed any disapproval of their notorious effort to legalise human vivisection; but that it does not hesitate to express its sympathy with those whose doings had made such an effort possible, while reserving its dissympathy and even bitter hostility for those whose tenets have frustrated that inhuman endeavour.—Your obedient servant,

A. GOFF.

FROM THE "ECHO," SEPTEMBER 8TH.

SIR,—The abominable proposals in regard to the vivisection of criminals recently brought before the Ohio State Legislature, and the apparent attitude of the *Lancet* in regard to them (as shown in the extract quoted by your correspondent in yesterday's issue) help to illustrate a truth for which anti-vivisectioners have always contended, that the only logical outcome of the vivisection of animals is the vivisection of human beings, and that to this we are pretty certain to come sooner or later, unless the hateful practice be stamped out, or at least rendered illegal, by the influence of public opinion acting upon legislation. Indeed we may be said to have reached that stage, in virtue of the experiments on hospital patients of which we have clear and incontestable proof. And why should not the practice of experimentation on the human subject become a recognised and legitimate thing, which it is no longer necessary to carry on timidly and clandestinely within the walls of hospitals on the poor, the weak, and the half-witted? It is perfectly clear that human beings afford a much more valuable and reliable field for experiment (especially if the real or assumed object be the study of human diseases with a view to their relief) than the lower animals can possibly do. If the advancement of science be all in all,

the supreme aim and end of human effort, why should we hesitate to allow human victims to be crushed beneath the wheels of this new Juggernaut?

The merciful man is merciful to his beast, and the man of intellect and culture who is merciless towards animals would also, generally speaking, be merciless under similar conditions to his fellow-creatures, were it not for the restraint of the law. Things are not so arranged in this world that a man can practise the most hideous and refined cruelties on helpless and unoffending animals, and yet retain intact his feelings of mercy towards his fellows. It is recorded that a certain *savant* once horrified the great and good Agassiz, by asserting that the true era of civilisation would have arrived when it was possible to go out and shoot a man for scientific purposes. Who knows how soon we may be within measurable distance of such a millennium? Let us trust, however, that the peoples of all countries calling themselves civilised will decide that it is by quite another road than that indicated by the pro-vivisection members of the Ohio State Legislature that the way to a higher civilization lies; and let us in England especially take to heart the words of our dead Laureate, that it is not knowledge alone, but knowledge allied with true wisdom, to which we must look for the development of the higher life of the race.—Your faithful servant,

September 5th.

C. E. TYRER.

SHAKESPEARE AND JOHNSON.

(FROM THE "DAILY NEWS," SEPTEMBER 19TH.)

SIR,—Your interesting notice of the new production of "Cymbeline" at the Lyceum encourages me to direct the attention of playgoers to a remarkable passage in that immortal tragedy. Never, I think, has

the great Poet who foreruns the ages
Anticipating all that shall be said

more surely forestalled the judgment of future generations than when he makes Cornelius condemn the Queen's projected experiments on animals with the stern observation that the (only verifiable) result of such researches is the hardening of the hearts of those who make them, and "infecting" the assistants with a morbid desire to repeat the "noisome" action. I refer to the lines—Act I., Scene 6:—

QUEEN— "I will try the forces
Of these thy compounds on such creatures as
We count not worth the hanging (but none human)
To try the vigour of them, and apply
Allayments to the ract, and by them gather
Their several virtues and effects."
CORNELIUS— "Your Highness
Shall from this practice but make hard your heart.
Besides, the seeing these effects will be
Both noisome and infectious."

This was the judgment passed on vivisection by the greatest genius of whom England boasts. Another great Englishman, Dr. Samuel Johnson, annotating this same play, wrote on the words in question the following remark: "There is in this passage nothing that much requires a note, yet I cannot forbear to push it forward into observation. The thought would probably have been more amplified had our author lived to be shocked with such experiments as have been published in later times by a race of men that have practised tortures without pity, and related them without shame, and are yet suffered to erect their heads among human beings."—I am, Sir, yours truly,

FRANCES POWER COBBE.

[When living antivivisectionists are denounced as fanatics for using plain language respecting the Science of Torture, it will be found wholesome to refer to such utterances as these of Shakespeare and Johnson, together with the further weighty sentences of the latter in his *Idler* (No. 17), that "he buys knowledge dear who learns the use of the lacteals at the expense of his own humanity;" and that "it is time that a universal resentment should arise against those horrid operations."—ED. Z.]

CORRESPONDENCE.

"MANŒUVRING OF SCHIFF."

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—I notice in the July number, page 48, that the result of some manœuvring of Schiff with the hairs on the cats' tail is spoken of as "a fact;" it is allowed as "an addition to scientific knowledge." *

In connection with this, will you kindly give room to some words of Ludimar Hermann, Professor of Physiology and Medical Physics, Zurich University:—

"Physiological experiments conducted in these regions are most indefinite. The usual plan of investigation, viz. that of applying stimuli to the brain substance, leads either to negative results, or if electrical stimulation is used, to results which, owing to the unavoidable dispersal of the currents in numerous directions, are not sufficiently localized to form the basis for trustworthy conclusions. In place of exact observation after section and stimulation of different regions, we have here the far less refined method of observation after lesions—lesions induced in the most delicate and complicated organ of the body by means so absurdly rough that, as Ludwig has forcibly put it, they may be compared to injuries to a watch by means of a pistol-shot. The results obtained in this way are attributable to the most diverse causes; for, apart from the fact that it is impossible to localise the lesion itself, the results may be due to irritation of centres, paralysis of centres, stimulation of conducting apparatus, without our being able to say which. Hence the interpretation of even those phenomena which are constant in their occurrence is always uncertain. The third and best method of investigation which is possible is the observation of cases of disease in which the exact nature of the lesion is accurately ascertained after death.—From Hermann's *Human Physiology*, translated by Professor Gamgee, London (1878), p. 444.

The Lumbar sympathetic nerve is a spinal extension of the brain substance, therefore subject to the same conditions. Section of a nerve during life is inseparable from a hurt, a wound, an injury which constitutes the act a lesion, attended by all the irregularities of nerve disturbance.

After death, section of the nerve and then stimulation would have told something.

I am, faithfully yours,

MARY J. HALL-WILLIAMS, M.D. (Boston).

DANGERS OF MEDICAL SCIENCE.—I.

(TO THE EDITOR OF "THE ZOOPHILIST.")

SIR,—We have all heard of the man who killed his pig to save its life; presumably meaning by its life, its body for use.

It seems that the medical profession are taking an idea from this celebrated individual, but unfortunately in their case a rational purpose cannot be pleaded in justification of such a course, as the bodies of patients have no pecuniary value when dead. So determined are some medical men to advance therapeutic science, quite regardless of the welfare of their patients, that nothing short of an act of parliament prohibiting and restricting the use of certain anti-toxins, can avail to protect the public from this new danger masked in the garb of a protector.

Such, at least, is the opinion expressed by Professor Brown in his paper on "The Use of Tuberculin and Mallein."

Tuberculin, the toxic principle with which the German Dr. Koch so quickly put all his tuberculous patients out of their pains, is now employed as a test by the owners of cattle to enable them to weed tuberculous animals out of their herds, and to send them to market.

"It has been proved," says Professor Brown, "that one effect of inoculating animals with tuberculin has been in some cases that of distributing the tubercle bacillus to parts of the body not previously affected." He further says, "The practice in question is more alarming from the fact that repeated injections of tuberculin have rendered animals insusceptible to it; and, therefore, if this result proves general, tuberculous cattle, rendered insusceptible, might be sold by unscrupulous men with full assurance that the disease could not be detected by means of the test."

Medical science, it is to be feared, is launching out a little too far into the sphere of the wonderful. Its professors, some

* Had our correspondent completed the quotation, which goes on to say—"It has no more bearing on medicine than the Transit of Venus"—it would seem to have been unnecessary to write this letter.

of them, have erred and strayed into devious ways—vivisection ways. Discoveries which endanger the public directly by killing patients, and indirectly by diseasing the animals used as food, and thereby rendering them sources of infection, are of doubtful value. We have been accustomed to regard doctors as unfamiliar friends to whom distance lent enchantment, and when we uttered the venerable if cynical prayer, "Save me from my friends," we unconsciously included them; but henceforth it will be necessary to signalize these too-anxious and ultra-scientific friends, and paraphrase this wise aspiration thus, "Save me from my friends, especially medical."—I am, Sir, yours truly,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

IN SEASON AND OUT OF SEASON.

(BY "SPERO MELIORA," IN THE "ECHO," AUGUST 25TH.)

A certain paper remarked the other day upon continuing in season and out of season to protest, with ill-advised enthusiasm, against those responsible for the awful abuse of the subjects of the present pseudo-scientific régime—or words to that effect. In season and out of season. Yes! Condemnation of such legalised iniquity is always in season with us. We cannot afford, because some wealthy or fortunate people among teeming millions are able to indulge themselves at the seaside and elsewhere for a lengthy period, or for any other reason, to allow the atrocious system of vivisection to go on unproved, or to cast away the thoughts and the sufferings the animals are so needlessly made to endure, or of the injury and wrong caused by it in so many ways. It is always in season for vivisection to torture animals, so it is always in season for human beings to take their part.

* * * * *

There is no such thing as out of season for Anti-Vivisection, or for those who are opposing other monopoly abuses: For mark well! Vivisection is also a monopoly, and of the worst kind. It is a monopoly granted to a clique of men to break the law of God and man in their own interests, and in the most shameless and conceivable ways—a monopoly that has brought in the past, and is still bringing, in its train much danger and mischief to us all. A monopoly that cannot be said to have properly answered any of those ends for which it was unscrupulously intended, except that of money-making and the making of very peculiar kinds of reputations. It has the smallest justification even upon the lowest grounds, although, of course, its representatives and supporters are always anxious and ready to make out that it has, without much regard to truth or accuracy, as has been specially noticed in several cases.

Why, then, should we restrain ourselves in season or out of season at such a system as this, at such nameless deeds as are constantly practised here and elsewhere in the name of Science, and at the men who commit them, not only without a shudder, but sometimes with a kind of delirious pleasure which the practice of such enormities has a tendency to produce?

* * * * *

We are, I am glad to see, beginning to resist more effectually this medico-scientific despotism which has of late years been growing more and more odious and over-bearing. It is alike our right and duty to continue to thunder, in season and out of season, with unabated energy, at the gates of the Castle of Torture.

TWENTY-TWO PASTEURIAN FAILURES IN ITALY.

PALERMO.

FAILURES at the anti-rabic institute of Palermo (Sicily) after treatment for hydrophobia according to the Pasteurian method (from the report of Drs. L. de Blasi and G. Russo Travali; Palermo, G. Bondi & Co., 1896).

(1) Cipriano, Rosario (42), Torretta, Sicily, bitten March 13th, 1887; date of treatment, 18th–27th March; first symptoms of hydrophobia, May 5th, 1887; death, May 7th, 1887.

(2) Manzione, Andrea (82), Palermo, Sicily, bitten May 24th,

1887; treatment, 4th—14th June; first symptoms, July 8th, 1887; death, July 12th.

(3) Bacchi, Emilia (22), Lercara, Sicily, bitten July 19th, 1888; treatment, July 20th—August 8th; first symptoms, September 1st, 1888; death, September 12th.

(4) Palmeri, Malchiorre (18), Calatafimi, Sicily, bitten November 30th, 1888; treatment, 1st—19th December; first symptoms, January 18th, 1889; death, January 20th.

(5) Ricciolo, Antonio (34), Palermo, bitten November 29th, 1888; treatment begun, December 3rd, 1888; first symptoms, December 15th, 1888; death, December 17th.

(6) Drago, Vincenzo (50), Tripi, Sicily, bitten November 18th, 1890; treatment begun, December 19th, 1890; first symptoms, January 1st, 1891; death, January 5th.

(7) Gagliani, Agata (4), Palermo, bitten May 4th, 1891; treatment, May 6th—30th; first symptoms, June 13th, 1891; death, June 18th.

(8) Inzerillo, Pietro (8), Partinico, Sicily, bitten June 14th, 1891; treatment, June 19—July 19th; first symptoms, August 14th, 1891; death, August 15th.

(9) Macca, Concetta (75), Catania, Sicily, bitten July 1st, 1891; treatment begun, July 21st; first symptoms, July 31st, 1891; death, August 2nd.

(10) Sanzia, Rosario (8), Palermo, bitten April 22nd, 1892; treatment, May 6th—26th; first symptoms, May 29th, 1892; death, May 30th.

(11) Nardo, Francesca Maria (6), Gioiosa, Sicily, bitten May 15th, 1893; treatment begun, May 18th; first symptoms, May 31st; death, June 1st.

(12) Badalucco, Mario (7), Marsala, Sicily, bitten July 28th, 1893; treatment begun, August 3rd; first symptoms, August 5th, 1893; death, August 17th.

(13) Bentivegna, Vincenzo (30), Corleone, Sicily, bitten March 4th, 1894; treatment, March 6th—26th; first symptoms, March 27th, 1894; death—?

(14) Culotta, Michele (74), Bagheria, Sicily, bitten June 18th, 1894; treatment, June 19th—July 8th; first symptoms? death, September 13th, 1894.

(15) Morreale, Angelo (8), Bagheria, Sicily, bitten July 29th, 1894; treatment, August 2nd—20th; first symptoms, November 10th, 1894; death, November 15th.

(16) Lonzino, Salerio (14), Borgetto, Sicily, bitten March 7th, 1895; treatment, March 9th—29th; first symptoms, April 5th, 1895; death, April 6th.

(17) Danio, Diego (15), Grotte, Sicily, bitten May 25th, 1895; treatment, May 31st—June 18th; first symptoms, July 2nd, 1895; death July 4th.

(18) Lo Presti Vito (55), Vizzini, Sicily, bitten October 8th, 1895; treatment, October 16th—November 3rd; first symptoms, November 23rd, 1895; death, November 25th.

(19) Plescia, Francesco (10), Contessa Entellina, Sicily, bitten March 2nd, 1895; treatment, May 11th—28th; first symptoms, February 2nd, 1896; death, February 10th.

MILAN.

(20) Of two fatal cases here the first was that of a child named Giovanni Varesi, aged 5, bitten on March 22nd, 1894, by a straying dog which took deep hold of his right cheek, and tore off a shred of flesh. The child was cauterized with a red-hot iron twelve hours after the bite. The head of the dog was sent to the Institute by the municipal authorities, and said to be proved to be affected with rabies. The treatment was applied to the child the day after the bite. The death of the child happened on the following 15th of May with all the symptoms of furious hydrophobia, that is fifty-four days after the bite, and thirty-seven after the completion of the treatment.

(21) The subject of the other "failure" was also a little child, Luigi Corpetti, native of Bobbio, who was bitten on April 8th, 1895, also by a straying dog, which flew at him without provocation. He had several serious wounds on the forehead, the nose and the right cheek. There was no cauterization. The intensive treatment was resorted to, and began two days after the attack. It was continued regularly for twenty days without any disturbance whatever of the child's health, but two days after his dismissal hydrophobia set in in its furious form, and the unfortunate child expired in the midst of a convulsion, on May 3rd, 1895.—*Il Secolo*, of Milan, August 13th.

The details of the treatment used at the *Istituto Antirabico* of Milan are the same as those practised at the *Institut Pasteur*

of Paris. No difference whatever has been introduced, but in some cases the intensive method has been applied.

TURIN.

(22) About twenty days ago, two children were bitten at Seriate, near Bergamo, by a dog which was proved to have been a rabid one. They were at once cauterized and sent to Turin, in order to undergo the Pasteurian treatment. On their return from Turin it was necessary to admit one of the children, Luigi Perico, thirteen years of age, into our hospital (Bergamo) because the disease manifested itself, and to-night the unfortunate child died, in spite of the anxious care which was bestowed upon him.—*Il Secolo*, of Milan, September 6th—7th, 1896.

FOREIGN INTELLIGENCE.

INDIA.

THE PROPOSED PASTEUR INSTITUTE.

We learn from the *Times of India* that on the 10th of August last a meeting was held at Simla for the promotion of a Pasteur Institute. The general feeling among those present is stated to have been that the Institute should do a good deal more than merely provide anti-rabic inoculation, and a scheme was submitted by Surgeon-Major Ranking from the Bengal Committee, under which bacteriological research and anti-cholera inoculation, investigations into diseases such as *kolar* *azar*, *berri-berri*, enteric, and other fevers, etc., would be carried out. This met with general approval; but until it is known what income will be guaranteed by the great commercial bodies interested in the supply of labour to tea gardens and collieries and in indigo and jute industries, it was resolved to postpone the election of a board of direction which would take final action in the matter. The Honorary Treasurer was empowered to invest the funds already collected, amounting to nearly Rs. 70,000, in Government and other securities similar to those in which the Dufferin Fund is invested. In the course of the proceedings Dr. Haffkine made some remarks, in which he advocated wider scope being given to the operations of the Institute than was originally intended when the movement was first started.

A general meeting of the Calcutta Anti-Vivisection Society had been called at the date of the departure of the mail bringing the above news for the purpose of "considering the proposal of submitting a Memorial to His Honour the Lieutenant-Governor of Bengal, praying His Honour not to sanction a plot of land for the erection of a Pasteur Institute at Darjeeling or other place under His Honour's authority, and not to render aid or assistance of any other kind towards the proposed establishment of that monument of wanton cruelty in India, its cruel objects and practices being quite against the susceptibilities and religion of millions of the inhabitants of this country."

CHOLERA INOCULATIONS.

The *Times of India* (August 4th) reports a visit to Poona by Dr. Haffkine in the following terms:—"We had a visit from Dr. Haffkine, who stayed here four or five days. He had brought with him from Calcutta his appliances for inoculating against cholera. He went round to the various regiments, and offered to inoculate persons who volunteered. About forty-four men in the Durhams submitted to the operation, about sixty in the Royal Irish Rifles, about seventy in the Native Cavalry and Infantry, and a good number amongst the Artillery, and fifty in the Sappers and Miners and Pioneers at Kirkee. The effect of this process seems to act differently on various people. Some were laid up with fever and pain at the time of inoculation, lasting for two days or more, some became so bad they went to hospital, and others were not much affected. The medical authorities here look upon the matter as experimental, as it seems doubtful how long the immunity lasts; and probably, though some of the medical officers themselves were operated upon, the process did not receive that encouragement from them which would induce a larger number of men to come forward. The pain is said to be very severe, and as only a proportion of people take cholera at any time, while there is no certainty how long the immunity lasts, some folks think, like Dickens's charity boy learning his alphabet, whether it is worth while going through so much to get so little."

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, THURSDAY, OCTOBER 1st, 1896.

MISLEADING EXPERIMENTS ON ANIMALS.

ACCORDING to an article in the *Times* of August 20th, 1896, page 4, on *Chloroform Commissions*, the result of Dr. LAUDER BRUNTON's investigations at Hyderabad in 1889 were the following definite conclusions:—

"The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

"The commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety, so as to do good without the risk of evil."

These conclusions, be it noted, were drawn (as stated by the *Times*) from "experiments on nearly 600 animals, chiefly pariah dogs and monkeys."

The *Lancet*, as the *Times* goes on to tell us, subsequently issued another Chloroform Commission, which proceeded by a different method; viz. that of obtaining all possible information concerning human deaths under chloroform at home and abroad, in public and private practice, and analyzing and tabulating them. The results of this inquiry show that—

"In the 716 deaths from, or during the administration of, chloroform, the pulse (in other words, the heart) was observed to fail first, certainly in 183 cases, and probably in 44 more, or in more than 31 per cent."

Thus the physicians who in the last seven years may have relied on the conclusions drawn by Dr. LAUDER BRUNTON from his experiments on 600 animals, and have been (as he advised) "guided as to the effect entirely by respiration" (paying no attention to the pulse), would, in one-third of their fatal cases, have been misled!

The *Times* observes on this highly instructive revelation:—"Whether the discrepancy between the results of clinical observation and the results of laboratory experiment may be due to difference of climate and temperature, or to differences between human beings and dogs or monkeys, it would at present be impossible to decide."

This suggestion, that the difference between men and

monkeys may have rendered the vivisectionists' experiments abortive and dangerously misleading, is one on which we have been insisting these twenty years. We have now before us an object-lesson on an immense scale, of the utter futility, and worse, of 600 vivisectional experiments conducted with immense pomp (and cost to the deluded RAJAH OF HYDERABAD (by one of the most eminent of English physiologists, the associate with Drs. BURDON SANDERSON, KLEIN and MICHAEL FOSTER in the compilation of the infamous "Handbook of the Physiological Laboratory."

We believe that the chloroformists of London have unanimously rejected Dr. LAUDER BRUNTON's conclusions; founding their own opposite one on actual clinical observation of the effects of the anæsthetic on thousands of human patients.

A more complete collapse of the boasted results of vivisection cannot be imagined.

SIR JOSEPH LISTER'S LIVERPOOL ADDRESS.

THE wisdom of the British Association for the Advancement of Science in excluding from its Sections medicine in all its branches has been amply justified by its recent departure in appointing a medical practitioner to its presidential chair. We venture to say that the example of 1896 is not likely to be repeated, even though a practitioner of medicine should again happen to be President of the Royal Society. As we understand it, the British Association concerns itself with pure science—that is to say, with the knowledge of natural phenomena quite irrespective of the ends to which that knowledge is, or may be applied. A medical practitioner is not a scientist at all, in so far as the practice of the Healing art is concerned. Medicine may be quite correctly described as "Jack of all sciences, and master of none." The great mistake in modern medical education (a mistake which many teachers are beginning to recognize) is the endeavour to make all students experts in every science rather than technically skilful in their art, when all that is necessary for the efficient discharge of their duties in life is an intelligent acquaintance with the several sciences with which their art is related.

Sir JOSEPH LISTER took for the subject of his address "The Interdependence of Science and the Healing Art," but we cannot say that he was very successful in the illustrations he brought forward in proving that science (as the British Association understands the word) has much to do with the present position of medicine. The *Lancet* (which is content to publish an abridged version of the address, Sept. 19), ecstatically remarks, it is true, that Sir JOSEPH "traced the struggles of medicine and surgery to escape from the toils of empiricism which even so lately as half a century ago were close around them," and that "there is no one whose labours have done more towards bringing about the desirable transition in so many directions from rules of thumb to rules of

science which the practitioners of medicine now rejoice in." We are glad to hear of the rejoicings, but we fear the PRESIDENT of the Royal College of Physicians is a better judge in this matter than is the editor of the *Lancet* or the PRESIDENT of the Royal Society, and we have Dr. WILKS's authority for it that there are no principles in medicine; and in this he only corroborates a predecessor in his chair, Sir ANDREW CLARK, who described medicine as "the most unprincipled of sciences." And Sir JOSEPH LISTER, himself, seems to have little respect for what is after all the vastly preponderant portion of the healing art, that, namely, which is concerned with administering remedies; for he said that the administration of anæsthetics "far from being like the giving of a dose of medicine, a *matter of rule of thumb*, imperatively demands the vigilant exercise of physiological and pathological knowledge." We have no doubt physicians will be grateful to Sir JOSEPH for the contrast. But though the prescription must still accept the humble position of an affair of empiricism and rule of thumb, the physician is not left without hope of seeing his art founded upon science, for are there not microbes in medicine as well as in surgery, and are there not viruses and attenuated viruses, toxins and anti-toxins? And what are all these if they are not science, even as antiseptic surgery is science? The unlucky part of the subject is that in spite of the undoubtedly scientific character of all these things the diseases in which they are concerned seem to go merrily on their way much as they did before science became aware of them. Diphtheria seems to increase rather than diminish for all the labours of BEHRING and ROUX. There are more deaths from hydrophobia now than there were before PASTEUR undertook to exterminate the disease. The efforts of KOCH have not arrested the march of consumption, though all the medical world rushed to Berlin for a supply of the precious fluid, whilst its nature was still kept a profound secret—medical ethics notwithstanding.

Naturally enough Sir JOSEPH had a great deal to say about antiseptic surgery. Now the only quarrel we have with antiseptic doctrines is the use that has been made of them by vivisectionists as a justification for all manner of experimenting on living animals and for throwing dust in the eyes of the public by making them suppose that vivisections done "with antiseptic precautions" are necessarily painless. But for these considerations we should be content to let Sir JOSEPH fight the battle out with Mr. LAWSON TAIT and other surgeons of the first rank who maintain that new antiseptics is merely old cleanliness writ dangerously and unnecessarily scientific.

Sir JOSEPH says he had long endeavoured to obviate the suppuration, which almost always occurred after surgical operations, but it seemed hopeless whilst LIEBIG's view prevailed, that the cause of it was atmospheric oxygen. It was only when PASTEUR showed that putrefaction was caused by living germs that the possibility of killing them without injuring the

tissues dawned upon the surgical mind. And now carbolic acid appears on the scene. Sir JOSEPH had "heard of it as having a remarkable deodorising effect on sewage." It is a pity Sir JOSEPH is so very brief on this point, for it happens that two years before Sir JOSEPH made his trials with carbolic acid, Dr. DÉCLAT, then of Paris, published a work on the antiseptic uses of the acid in the treatment of wounds. It is almost impossible that Sir JOSEPH can have been ignorant of DÉCLAT's work, and of the several years of experience which it related. In that case, what becomes of the beautiful scientific deduction which Sir JOSEPH now imagines took place in his own mind?

The invention of LISTER's which was truly original was the hand and steam engines he devised for filling the operating theatre with carbolic spray in order to kill PASTEUR's atmospheric germs, before they alighted on the wounded surface. It was this wonderful scientific instrument which was the essential feature of antiseptic surgery, and which carried the fame of it throughout the civilized world, and the neglect of the use of which, on the part of an operator, was stigmatized as equivalent to murder by all true Listerians. But, alas, for science in medicine, the much-abused experience or empiricism proved that the spray was not only an expensive and a useless toy, it was highly dangerous to boot. The germs flourished in spite of the spray, but patients and even surgeons sickened. And, alas for the scientific theories, on the strength of which carbolic acid is supposed to have become LISTER's discovery, instead of DÉCLAT's, LISTER's main theory that blood must be a peculiarly favourable soil for the growth of putrefactive microbes, was afterwards found to be "by no means the case." LISTER's previous experiments had been made with milk, and he had rashly concluded that what happened in the case of milk must necessarily happen in the case of a wounded surface. So the theory had to be given up, and the atmospheric germs were left to themselves, and the spray was seen in operating theatres no more. And now this is what it all amounts to, in Sir JOSEPH's own words:—

"The irritation of the wounds by antiseptic irrigation and washing may therefore now be avoided, and *nature left quite undisturbed to carry out her best methods of repair, while the surgeon may conduct his operations as simply as in former days, provided always that . . . he vigilantly maintains from first to last . . . the use of simple means which will suffice to exclude from the wound the coarser forms of septic impurity.*"

The opponents of the antiseptic doctrines and antiseptic paraphernalia could desire no better justification of their contentions than is contained in these words of the apostle of antiseptics.

Why LISTER should be such a strenuous supporter of vivisection we fail to see, for experiments on animals seem to have had no vital connection with antiseptics from beginning to end. Possibly it is because PASTEUR's germs having entered LISTER's mind have played the part of cuckoo, and entirely expelled DÉCLAT's experience from his consciousness. At any rate, LISTER never

mentions DÉCLAT, and is never tired of singing PASTEUR'S praises; and unfortunately when on this theme he is apt to sing falsetto. It will be within the recollection of our readers that on an important occasion, not very long ago, Sir JOSEPH calmly assured the HOME SECRETARY (or some other member of the Cabinet) that PASTEUR had saved twelve thousand persons from death by hydrophobia! This monstrous statement was not the utterance of a man of science, but of a bigoted partisan. A man of science may be a specialist without being a bigot. Sir JOSEPH LISTER is not a man of science at all; he is a medical practitioner, gifted with a certain amount of imagination, and a large amount of energy and enthusiasm, but bound hand and foot with the narrownesses and prejudices of his class. For the future the British Association will do well to stick to its rule, and choose its presidents outside the medical profession.

"CLINCHERS" UNCLINCHED.

SOME of our abler and more scientific opponents, recognizing the fact that our friends are usually much better informed upon the vivisection question than the ordinary general practitioners who rise to controvert the arguments of our speakers at public meetings, and that the readers of the *Zoophilist* are able to make light work of the antiquated "Harvey and the Circulation," ovariectomy, testing of drugs, and such like stock arguments of the apologists of scientific cruelty, have set to work to find out something that they declare we cannot answer. Arguments so crushing, so forcible that they call them "clinchers," have been drawn up and circulated amongst our supporters by a GOLIATH of Gath, who defies the armies of Israel, and, brandishing his spear, cries, "Give me a man that we may fight together." We are neither dismayed nor greatly afraid. We have our sling and a good stock of pebbles, and we propose to attack our giant.

"Things not possible to prove or even demonstrate except by 'vivisection,'" is the legend at the head of this latest manifesto, a copy of which, by the favour of one of our friends, has reached our office. Now we may say in passing that we have never denied that by vivisection certain things may be "demonstrated"; theories "proved" is another matter altogether, and he would be a bold experimenter indeed who, in the face of his colleagues, should declare that he had *proved* anything whatever; he would certainly set a whole army of researchers to demonstrate that he had done nothing of the kind. "*Proved*" and "*demonstrated*," therefore, no more alarm us than the helmet of brass on the giant's head alarmed David. We know this Brummagem brass armour.

The "Clinchers" are supposed to be taken from the well-known text-book of physiology of Messrs. LANDOIS and STIRLING, and Clincher No. 1 is entitled, "INHIBITION OF THE HEART." This deals with the function of the branch of the pneumo-gastric nerve going to the heart. "WEBER," says Prof. MICHAEL FOSTER, "by a direct experiment on a living animal, discovered the inhibitory

[or restraining] influence of the pneumo-gastric nerve over the beating of the heart." The experiment is a very dangerous one to life, and of course could not be performed on man, it is argued. The fibres of this nerve when moderately stimulated diminish the heart's action; when, however, they are strongly stimulated they arrest its action. But SCHIFF says that in some animals feeble stimulation of this nerve occasionally causes acceleration of the beats of the heart, and in fishes it has "the very peculiar effect of rendering the muscular tissue temporarily incapable of responding to even the strongest direct stimuli." *

The fact is that the whole matter is involved in obscurity, notwithstanding the many cruel experiments performed with a view to clearing it up. The brain and spinal cord have been destroyed, but the heart's action has gone on much the same as before. Many of the lower animals have continued to live long after their heads have been cut off. Babies have been born without any brain or spinal cord, yet the heart's action has been perfect. "Various theories," says Dr. KIRKE † "have been proposed to account for these peculiar results, but none of them is very satisfactory, and it is probable that many more facts must be discovered before any theory on the subject can be permanently maintained."

There need be no painful experiments to study the question. Headless fetuses soon die; they can be watched during life and examined after death. Dr. J. W. PICKERING, of the Physiological Laboratory of King's College, London, has for several years past been engaged in a series of researches on the Hearts of Mammalian and Chick-Embryos. In the *Journal of Physiology*, vol. xx., p. 165, 1896, he describes his numerous experiments on this question of the Inhibition of the Heart. If it had been all settled by previous experiments, why is Mr. PICKERING still laboriously studying it on the embryo?

"HEART" again is the title of another "clinker." The writer says that in the text-book he refers to, "A rare case is given showing what has been done on human beings when opportunity allowed." The case referred to, we find, is the awful one of the poor woman, FRAU SERAFIN, in a hospital in Germany, whose heart was laid bare by an operation, and who was subjected to a long course of purely scientific experiment by Professor VON ZIEMSEN, merely to produce arguments to confute the views of another experimenter named BRUCKE, on the automatic regulation of the heart. "To him it seemed," etc., say LANDOIS and STIRLING, and then proceed, "The following considerations militate against this theory." Cruel experiments on dogs, a woman, and a boy were performed to upset a "view" and establish a "theory," and this is the whole work of the vivisector. This "clinker" asserts that the precise meaning of the heart sounds has been determined by experiments on animals. The truth is, the matter is still under vigorous discussion. Then our authority says (p. 69), "MAGINI

* Landois and Stirling, p. 669.

† "Handbook of Physiology," 8th edition, p. 131.

operating on dogs with a trocar which perpetrated the cavities of the heart, found none of the secondary elevations (with a special apparatus) obtained by MAREV." "It is still to be determined . . . or whether . . . the latter view . . . while many of the more recent observers . . ." These are the terms in which LANDOIS and STIRLING set forth the confused opinions of the belligerent experimenters. Yet our "Clincher" tries to make his readers believe that, given sufficient dogs and rabbits, the researchers harmoniously settle all the physiological difficulties which the physicians propound to them.

"MOTOR-CENTRES AND CEREBRAL EPILEPSY" is the third poser. "It was of great importance to show whether irritation of particular spots could cause epileptic attacks of a particular character, as then an operation could be done which would ease the sufferer by removing whatever irritated these spots, and so caused the attacks. This has recently been done, and with confidence [since certain experiments have been performed]." Although an immense number of very cruel experiments have been performed upon animals in this class of research, it is not the fact that the knowledge necessary for brain-operations have been gained by vivisection. Dr. TODD performed experiments in order to discover the effects of irritating the convulsions of the brain. He thrust five bradawls into the brains of rabbits, and passed through them currents from an electrical apparatus; in this way he obtained various movements of the limbs, face, and eyes*. But HUGHLINGS JACKSON, and BROCA discovered the brain centres for the hand and many other general doctrines, and the centre for speech, by long and patient bedside observation and comparison with *post mortem* observation. "The solid facts on which we make our daily localisation diagnoses," said Professor PARVIN, M.D., before the American Academy of Medicine, "have been patiently accumulated by pathologists, and would stand to-day if not one animal's brain had been touched." Professor CHARCOT justly said, "It is in brain that we differ most from the animals." How could the centre for speech have been discovered by experiments on dumb animals? What relation has the artificially-produced epilepsy of a dog to the disease in a human being? Says Dr. JULIUS ALTHAUS, Consulting Physician to the Epileptic Hospital, London, and himself a vivisector: "A form of epilepsy may be caused in guinea-pigs which, in some respects, resembles human epilepsy . . . yet is, after all, by no means the actual disease with which we are familiar in our patients."†

"THE FUNCTIONS OF THE LESSER BRAIN OR CEREBELLUM" is a subject germane to the "clincher" in debate, and may be considered in this connection. It is maintained that their investigation could not have been carried out on the human subject. This is not true. Disease of the lesser brain in man has been observed to produce the same effects as its experimental mutilation in animals. Destruction of a part of the cerebellum in an animal

causes it to turn round and round continuously, it may be for several days. Dr. PAGET observed similar effects from disease in two of his patients. The notorious vivisector, Dr. BROWN-SÉQUARD, denies, as the result of his own experiments, that the function of the lesser brain is that of co-ordination [or bringing into harmony] of muscular movements. Instead of learning from disease he misinterpreted the teaching of his experimental work, and if we had nothing to guide us but BROWN-SÉQUARD's theories we should be compelled to believe that the cerebellum had no function at all.

"THE LUNGS" afford our physiologist an opportunity for striking another "clincher." But this is only a very feeble one. Presumably the efforts necessary for dealing us the above heavy blows have exhausted the clinchist. He says that certain experiments in depriving animals of air could not have been done in man. For example, it has been discovered that rabbits died after absorbing carbonic acid equal to half the volume of their body, although the air still contained fifty per cent. of oxygen. CLAUDE BERNARD found that, when an animal breathed in a limited space, it became partially accustomed to the condition. On placing a bird under a bell-jar, it lived several hours; but if several hours before its death another bird fresh from the outer air were placed under the same bell-jar, the second bird died at once with convulsions. Surely we hardly needed such an experiment to teach us what is a matter of daily observation, that animals and men can gradually accustom themselves with impunity to conditions of life that would be impossible for them if suddenly assumed.

We are next confronted with "TEMPERATURE EXPERIMENTS ON ANIMALS AND MAN," and we learn that "Man cannot be experimented on in any case which may cause his death," and we learn this with a great sense of relief, though we had an idea that researchers would require very little persuasion to induce them to experiment to any extent on criminals if they had the chance. We are told that the experiments showing death from increased temperature were followed by a great change in the treatment of fevers, as by cold douching. But this is a glaring example of the vivisector's artful ways. He observes a certain fact, notes a certain therapeutic method in vogue by common people or savages, experiments with it upon animals, and then with a flourish of scientific trumpets introduces it to the world as a great physiological discovery. The water cure was well known to the Greek and Roman physicians, and in the fifteenth century was certainly practised in France and Italy. J. G. and J. S. HAHN towards the middle of the eighteenth century treated fevers with it, and were so convinced of the value of cold sponging in febrile disorders that when one of them was attacked with typhoid fever he subjected himself to this curative process.* That is now introduced as the result of cruel experiments on animals by baking and freezing them to death. This poor little tin-tack wants no unclenching, it hardly penetrates the surface.

* Wilks, "Diseases of the Nervous System," p. 318.

† *British Medical Journal*, June 4th, 1881, p. 873.

* Quain's *Dict. Med.*, art. "Hydrotherapeutics."

The nails become smaller as the clinchist proceeds ; his tenpenny ones did not hold out long, as we have seen, and with the exception of a few brads, his metal is exhausted, but we will deal with them all. "THE VASO-MOTOR CENTRES" come next. The vaso-motor nerves pass to the blood-vessels, and their dominating centre lies in the *medulla oblongata*. It is claimed that the physiology of the centres of these nerves can only be learned by vivisection. This is not true. It can be studied and demonstrated on pithed frogs. To pith an animal is to kill it by severing the spinal cord. LANDOIS and STIRLING say (page 673), "If the frogs be pithed and their hearts exposed, etc., etc. Destroy the *medulla oblongata* and spinal cord of one of them, then immediately, in this case, the heart, although continuing to beat with an altered rhythm, ceases to be filled with blood. . . . This experiment of GOLTZ is held to show the existence of *venous tonus* depending on a cerebro-spinal centre." It may be necessary to remind the reader that a frog's heart will continue to beat long after its removal from the body. QUAIN* refers to experiments of this character "on living or *recently killed animals*, in which artificial irritation of the roots of the spinal nerves, or of various parts of the cerebro-spinal centre, caused movements of the viscera." We need do no more in this place than remind the reader that Sir CHARLES BELL, whose discoveries in relation to the nerves are as immortal as those of HARVEY in connection with the circulation, protested that vivisection had nothing whatever to do with them.†

The next instance given is "THE AUTOMATIC MOTOR CENTRES OF THE HEART," which are declared to be "all impossible to show in the living or dead human being. Experiments can be made on the lower animals' hearts which cannot be made at all on human hearts, and which yet are of the greatest value to the latter." Let us see what this objection is worth. We have explained above that the heart of a frog will continue to beat long after its removal from the body, and it happens that it is precisely on such organs that the automatic motor centres of the heart have been studied. Our clinchist actually refers to LANDOIS and STIRLING'S "Physiology" (pp.78-80), in proof of his contention ; but he does not inform us that his authority has filled many pages with the results of experiments on frogs' hearts, *i.e.* hearts of pithed, consequently dead, frogs. Nor does he tell us anything of Dr. PICKERING'S researches on the hearts of chicks in the egg and mammalian embryos. This nail cannot be clinched, because it had a flaw in it, and broke before it could be turned over.

Raking about in his nail box, and finding that all his decent metal has been used up, he turns out "BLOOD PRESSURE EXPERIMENTS," which, he says, "are of the utmost importance and could not be done on the human being, as they involve grave injury with immediate or subsequent death."

In the year 1727 the Rev. STEPHEN HALES invented a method of studying the blood-pressure in animals by

introducing a long glass tube into a blood-vessel of a horse in order to estimate the blood-pressure by measuring the height of the column of blood. The experiments in connection with the blood-pressure are still going on, and many points in connection therewith are still the subject of controversy. After 169 years of experimentation on animals an American researcher has just pointed out what none of the wise men had thought of before—that the blood-pressure of quadrupeds, whose trunk-vessels of course are horizontal, must be a very fallacious guide in questions of the blood-pressure of man, who is an erect animal, and whose blood vessels of course run vertically. If these experiments are, indeed, "of the utmost importance" to medicine, it is a pity they cannot be completed in less than 169 years. "Men have died and worms have eaten them," while the vivisectors have been pretending to help the doctors by fumbling with glass tubes in animals' hearts, and overlooking the difference between the horizontal and vertical attitudes.

Now we come to "DRUGS AND DOSES." Vivisectors, of late, have been rather shy of declaring, as Dr. LAUDER BRUNTON once did, that "almost all our exact knowledge of the action of drugs on the various organs of the body has been obtained by experiments upon animals." Our readers will not have forgotten our papers on the *Futility of Experiments with Drugs upon Animals*, and the numerous proofs we gave of the diverse action of drugs upon animals and men. Our clinchist is far too clever to attempt the absurd thesis of Dr. BRUNTON. He contents himself with the meek little suggestion that "the doses of drugs vary in their effect according to the amount given per pound of body weight whether animal or human." In the name of all the 'ologies, what has this to do with vivisection ?

VIVISECTION AND MAGIC.

IN all countries and in all ages, at some period or other in their history, witchcraft and magic have been allied with the profession of medicine. Travellers, anthropologists, and historians have told us that not savages alone, but the most civilized races of the past employed the arts of magic in the treatment of disease, and in that magic the torture of animals was a prominent feature. The cruelties of the sorcerer were the foreshadowing of those of the torture chambers of science, and like them, inasmuch as they were the vain attempts to achieve knowledge and power by unhallowed means. The sorcerer and the witch, had they possessed the science of the physiologist, would have equalled him in cruelty. They were only less cruel because they were more ignorant.

Society congratulates itself that in the present enlightened age men have risen above such childish and malicious practices, but probably if the animals could give us their opinions upon the matter they would vehemently contest this. The tortures of the sorcerer and the charm-inventor were as nothing compared to the cruelties of the modern vivisector, and the latter are often quite as childish as the former. The art of extracting poison

* "Anatomy," vol. ii., 8th edition, p. 158.

† "Nervous System of the Body" (1839), p. 217.

from toads reminds us of nothing so forcibly as the experiments of the vivisector who endeavoured in vain to make scorpions commit suicide by inflicting upon them the most sickening torments he could invent. Tearing out the tongues and hearts of living animals to make charms for cataract and colic were not a whit more absurd than the experiments of Dr. CASTEX, who dislocated the limbs of a poodle and beat the thighs of a large watch dog a dozen times with a great stone bottle. Faith might have operated to cure the colic when the charm was employed, but the atrocities of a CASTEX could have been nothing but fruitless. It is questionable, indeed, if there be not more to be said for the use of animals in magic than for modern vivisection. If a man felt he was protected from the bite of a venomous reptile by carrying about his person a toad in a horn box he at least derived some comfort from the practice, but it is impossible to believe that anybody was ever benefited by the experiment Dr. CARPENTER described of pouring boiling water into a dog's stomach. The old magician's practices were at least spiritual, and operated through the higher nature of man. The diabolical mutilations, the recording apparatus, the artificial respiration apparatus, and the electrical machinery of our modern laboratories are simply brutally mechanical, and can no more contribute to our healing methods than the workmanship of automatic chess-players. The magician and sorcerer had a loftier idea of the principle of life and a greater reverence for the higher nature of man than our modern researchers exhibit. The one at least recognized that we are more than matter, and can be influenced by immaterial means; the others prove that they hold animal bodies to be mere automata, and have no more regard for feeling than for mechanical movement. How is it that, whether barbarian or civilized, man must always torture the animals who help him to live and work? Is it some dim and perverted sense of the mystery of life, a mystery which cannot be solved, but which so much the more torments him with a passion for connecting all its phenomena in some way or other with his own existence? "I live, the animal lives, it symbolizes me, I will appropriate to myself the life and feeling, whatever they be, which the animal possesses. The greater the mystery the more certainly it must help me." This seems at bottom the animating impulse of wizard and vivisector, and both have perverted a great truth.

HOME INTELLIGENCE.

BRIGHTON.

The Brighton Working Men's Branch of the London Anti-Vivisection Society held a meeting at St. Luke's Schoolrooms, Queen's Park Road, on Wednesday evening, August 26th. The Rev. W. N. P. Beebe presided, and there were also present the Rev. Seymer Terry, Mr. Dawson, M.R.C.V.S., Mr. Tuppin, and Mr. C. H. Bray (honorary secretary). The Chairman, in his opening remarks, described the cruel practice they wanted to put down as a blot at once upon their Christianity and upon their civilisation. Miss Woodward, a delegate from the parent society, gave an

interesting address, in the course of which she said that last year there were 4,769 vivisections in England, in 3,119 of which anæsthetics were wholly or partially disused. The speaker concluded her address by saying that the less they said concerning the "humanity" of English vivisectors the better! The Rev. Seymer Terry and Mr. R. J. Dawson having spoken, Mr. Tuppin moved:—"That this meeting protests against the practice of vivisection as being cruel in its tendencies, of no practical utility, and most decidedly immoral." This being seconded, was unanimously carried. The customary votes of thanks brought the meeting to a conclusion.

MR. T. A. WILLIAMS ON TOUR. BIRMINGHAM.

During August Mr. T. A. Williams spent one week at Birmingham, speaking each day in the dinner-hour to the workmen at the large factories. In the evenings addresses were given in the Bull Ring, Gosta Green, at the Five Ways, and Selby Oak. On the Sunday evening Mr. Williams gave an address at the Lecture Hall, Dr. Johnson's Passage, and the Rev. W. J. Clarke, of the People's Hall, and Mr. T. H. Aston, both sent invitations for Mr. Williams to occupy their pulpits upon some future occasion.

YORK.

Early last month Mr. T. A. Williams was addressing meetings in York. On Thursday evening, September 3rd, he addressed an audience in the Market Place upon "The cruelty and uselessness of animal experiment." At the end of his address Mr. Pickering proposed, and Mr. Wright seconded, the following resolution:—"That this meeting is of opinion that the practice of vivisection is cruel, that the results of the practice cannot be applied to human subjects, and, moreover, it leads to the demand for experiments upon human beings, and these become a danger to hospital patients."

A meeting for the formation of a working men's anti-vivisection society was held at the Y.M.C.A. rooms, High Ousegate, on Wednesday, September 9th. Mr. Ratcliffe, in the earlier part, and Mr. Pickering in the latter part of the evening, presided. Mr. T. A. Williams, who addressed the meeting, summed up by saying that there was only one safeguard to animals and men against the practice of vivisection, and that was its total prohibition. The present law with regard to vivisection was, he contended, of little use, and he quoted the sayings of eminent scientists and medical men in his argument that vivisection had been of very little benefit to the human race, whilst it was abominably cruel. On the proposition of Mr. Pickering, seconded by Mr. Alfred Brown, the following resolution was passed:—"That this meeting of working men believes the practice of vivisection to be cruel, degrading, and unnecessary, and a danger to hospital patients. It pledges itself to form a York branch of the Victoria Street Society, with the object of the suppression of the practice of vivisection, by means of canvassing, the distribution of the society's literature, and ultimately by legislation." The meeting then discussed the details as to the formation of the branch.

LEEDS.

From York Mr. Williams went to Leeds, where a vigorous campaign was carried on for a fortnight, meetings being addressed each day. Much interest was shown in the subject. Evening meetings were held in the localities of Hunslet Moor, Woodhouse Moor, and Briggate. Dinner-hour addresses were also given to the men at Messrs. Kitson and Co.'s, Fowler and Co.'s, Cooke and Co.'s, and Greenwood and Batly's Works. On the latter occasion some 800 men were present, and a workman proposed that another meeting be addressed on the following day. This was done, and many of the men expressed their sympathy with the movement.

SOUTHPORT.

MEETINGS ON THE SHORE.

Mr. Arthur Westcott, one of the lecturers from the Victoria Street Society, opened a week's crusade against vivisection, at Southport, on the 18th August, delivering lectures on the shore

morning and evening. On the latter occasion the audience included Mr. Brimelow, J.P., and a number of ladies.

The lecturer protested strongly against the cruelties carried on under the name of vivisection, which, he said, embraced every kind of torture which could be performed on animals. As illustrating the great extent to which the practice had been carried on in this country, he mentioned that four thousand experiments had been performed in Great Britain during the past year, more than one-third of the number being executed on animals whilst in a conscious state, and capable of suffering every pang of torture. They were frequently told that the effect of these experiments was not cruel and did not cause pain, and an endeavour was made to justify them by the statement that they were essential to the progress of science. In refutation of this assertion the lecturer quoted the reports made by one of the experimenters, M. de Cyon, who stated that in one case the problem was to create the most intense pain and keep the creature in a perfectly motionless attitude. Mr. Westcott also remarked upon the futility of supposing that any good to humanity could result from experiments made upon an animal so greatly different in structure to man, and even though mankind could be benefited, he did not believe there was a man, however low in the social scale, who, if he knew the details of the operations and the amount of the torture inflicted, would stoop to a gain bought at such a price. After expressing his opinion of doctors and their methods, he referred to their expressed Utopian hope of discovering a means of banishing disease by inoculation with some animal extract. "Salvation by filth" seemed to be the predominating idea of their doctrines, and the lecturer recommended in preference an improvement in the system of sanitation, which was after all one of the greatest safeguards against disease. After dwelling upon the enormous sacrifice of animal life involved, the lecturer referred to the inadequacy of the system of inspection carried out under the present Act, to the harmful effects on medical students, and to the moral argument against the practice of vivisection.

This work was successfully continued for the week.

IRELAND.

A PASTEUR PATIENT GOES MAD.

A Clonmel message to the *Dublin Evening Telegraph*, September 8th, says—"A man named Condon, from Carrick, who was treated in the Pasteur Institute recently for having been bitten by a mad dog, was taken into custody by the police last week on account of his strange behaviour. His wife visited him in the police barrack, and when she attempted to shake hands with him he snapped at her with his teeth. The case looked serious, and on the man having been examined by two doctors he was committed to the County Asylum."

THE SCOTTISH SOCIETY.

AYR.

On Sunday afternoon, 13th September, Colonel Waterston, secretary, delivered a lecture in the Congregational Church, Ayr, from the text, "A righteous man regardeth the life of his beast, but the tender mercies of the wicked are cruel" (Prov. xii. 10). There was a large and attentive audience, to whom at the close literature was distributed.

INVERNESS.

On Sunday evening, September 20th, Colonel Waterston lectured in the Gaelic Parish Church, Inverness, on the subject of Life, showing that life is not in where we are, but in what we are. The large building was filled by a very attentive audience.

On Monday evening following a meeting was held in the Young Men's Christian Association Rooms, Castle Street.

Baillie Elliot presided, and there was a good attendance. The Rev. John Baird, of Edinburgh, delivered a stirring address on "Pasteur and Hydrophobia." He began by referring to the sympathetic feeling prevailing in this country in comparison to that found abroad in reference to the Armenians. It was a tribute to our advanced moral position. To conserve its pre-eminence in humanity and mercy was the duty of every patriot and Christian. Reference was also made at length to Sir Joseph Lister's address to the British

Association, Mr. Baird remarking that for the germ theory we were entirely indebted to microscopic observation.

In conclusion, he referred to the recent congress at Budapest, and stated that the decisive vote of the delegates there against vivisection was a most hopeful sign of the times.

The Rev. Chas. MacEachern and Col. Waterston also spoke.

WE (*Life*, New York, July 30th) have received a pleasant note from Denver, in which the writer speaks of vivisection as "this most cowardly, senseless and damnable crime." Those are strong words, brother, and of course they pain our ears; but as they fit the case with precision and are if anything a trifle too moderate we can pardon you this once. The more humane physicians all over the country are themselves signing petitions against this exciting sport, and it begins to look as if public opinion might in time accomplish a good result where mercy and progress have hitherto been powerless.

THE CHOLERA AND INOCULATION.—Dr. Klein, bacteriologist to the Local Government Board in England, no longer disputes the contention that the microbe in question is the prime offender in every case of cholera. In this country the sanitary authorities will not allow it to be veritable cholera unless traces of the *comma bacillus* can be discovered. On the other hand, there are experts who say that this microbe may or may not be present, and that there is no particular *bacillus* which can be regarded as invariably implicated in or associated with the disease. This is said to be the conclusion arrived at, after long and patient investigation, by the chemists working under the Government Sanitary Commissioner in India. These trained observers have been cultivating colonies of disease germs for some time past, and they profess to prove beyond dispute that there is no connection between the presence of any sort or kind of *bacillus* and the occurrence of cholera. And even in Calcutta, one of the Health Officer's medical colleagues, Brigade Surgeon Lieut.-Colonel Sanders, is opposed to inoculation, on the ground that it is futile as well as dangerous to health. It now rests with the Municipal Commissioners to decide whether the experiments shall be continued. On the whole, public opinion in the Presidency seems to be in favour of going on with them, though it remains to be seen what view the Bengal Government will take.—*The Standard*, August 25th, 1896.

THE "LANCET" AND ORGANIC EXTRACT MEDICINES.—"It is scarcely credible that organs, the integrity or even the presence of which is absolutely non-essential to health—organs which have well-recognized functions, but functions in no way connected with nutrition—can possess any such properties, or that the ingestion of their substance can provide a panacea for the diseases to which they are liable. 'Isopathy,' as the Americans call it, seems to us a retrogression to the superstitions of the Middle Ages or the practices of cannibals, who believe that by eating the heart of a hero they become heroes themselves. In a list of preparations of so-called advanced pharmacy which has been widely distributed among medical men, we observe preparations of uterine, ovarian, renal, splenic, and salivary gland tissue, and pineal and pituitary extracts, which, we are told, 'are supposed' to exert some influence on disorders of these organs, or, in the case of the two last mentioned, some unknown action on the system generally; but we are not informed whether the ovaries, etc., employed are those of man, beast, or bird. Hearts, kidneys, and brains are daily consumed by tens and hundreds of thousands without any perceptible influence on the functions of these organs in health or disease."—*Lancet*, July 4th, p. 36.

GEORGE DU MAURIER AND VIVISECTION.—The following light touch upon vivisection, which many of our readers may have seen in the original, seems to show a tendency on the part of the famous *Punch* artist, and now successful author, to disapprove it:—"It was as though some part of his brain where his affections had been seated had been paralysed, while all the rest of it was as keen and active as ever. He felt like some poor live bird or beast or reptile, a part of whose cerebrum (or cerebellum, or whatever it is) had been dug out by the vivisector for experimental purposes; and the strongest emotional feeling he seemed capable of was his anxiety and alarm about this curious symptom, and his concern as to whether he ought to mention it or not."—*Trilby*, 1 vol., p. 202.

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M. PAUL VIGUIER.
MR. WILLIAM WATSON.
Mrs. RICHARD P. WHITE.
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Rev. Canon WHITTINGTON.
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SPECIAL SUPPLEMENT TO THE ZOO PHILIST.

LONDON, OCTOBER 1, 1896.

VIVISECTORS AT THE HOSPITALS.

MANY of our friends who are desirous of contributing to the relief of human suffering having frequently inquired as to whether any and which of the Hospitals have Vivisectors connected with them, we have compiled from "The Medical Directory, 1896," and the Official Returns for 1895, the following

LIST OF HOSPITALS, ASYLUMS, ETC.,

HAVING LICENSED OR UNLICENSED VIVISECTORS, OR PRO-VIVISECTORS, AT WORK IN THEIR SCHOOLS, OR INCLUDED IN THEIR MEDICAL STAFF :—

LONDON.

Name of Hospital.	Name of Vivisector, or Pro-Vivisector.	Years in which a License (if any) was held.
ALEXANDRA HOSPITAL FOR CHILDREN WITH HIP DISEASE, 18, Queen Square, Bloomsbury, W.C.	BOWLBY, ANTHONY ALFRED, F.R.C.S.	1887.
BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.	CAUTLEY, EDMUND, M.D.	1892-3-4-5.
BRITISH LYING-IN HOSPITAL, Endell Street, Long Acre, W.C.	COLLINS, ED. TREACHER, F.R.C.S.	1892.
	WELLS, SIR T. SPENCER, Bart.*	
CANCER HOSPITAL, Brompton, S.W.	JESSETT, FREDERICK B., F.R.O.S.	1891-2-3.
	COTTERELL, ED., F.R.C.S., L.R.C.P.	1891-2-3-4.
	PLIMMER, H. G., M.R.C.S.	1894-5.
CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.	JESSOP, W. H. H., F.R.C.S., &c.	1885-6-7-8-9.
CHARING CROSS HOSPITAL, W.C.	MACLEHOSE, NORMAN M., M.B.	1894-5.
	ARKLE, CHARLES J., M.D.	1893-4-5.
	FAYRER, SIR J., M.D., &c.*	1878.
	MOTT, F. W., M.R.C.S., &c.	1883-4-6-7-9-90-1-2-3-4-5.
	HUNTER, WM., M.D.	1891-2-5.
CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.	WELLS, SIR T. SPENCER, Bart.*	
CHILDREN'S HOSPITAL, Paddington Green, W.	BRUNTON, THOMAS LAUDER, M.D., F.R.C.S. ..	1878-9-80-1-2-3-4-5-6-7-8-91-4.
	CHEYNE, WILLIAM WATSON, M.B., F.R.C.S. ..	1880-1-2-3-4-5-6-7-8-91-2-3-4-5.
	JESSOP, W. H. H., F.R.C.S., &c.	1885-6-7-8-9.
	RINGER, SYDNEY, M.D.*	1878-9-84-5.
	LISTER, SIR J., Bart., M.D., F.R.C.S., &c.*	"
	LACK, H. L., M.D.	1894-5.
CITY OF LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Victoria Park, E.	HARRIS, VINCENT DORMER, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5.
	HERON, GEORGE ALLAN, M.D.	1891-2-3.
	BEEVOR, SIR H. R., M.R.C.S.	1891-2-3-4.
	CHAPLIN, T. H. ARNOLD, M.B., M.R.C.P. ..	1892-3-4.
	FYFFE, W. KINGTON, M.B.	1893.
CRIPPLES' HOME, Marylebone Road, W.	HABERSHON, S. H., M.D.	1892-3.
DENTAL HOSPITAL OF LONDON, Leicester Square, W.	BUXTON, DUDLEY WILMOT, M.D., B.S. ..	1891-2-3-4-5.
EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.	WILLIAMS, DAWSON, M.R.C.S., &c.	1882-3-4-5-6.
	HAYWARD, J. A., M.D.	1894-5.
	CHAPLIN, T. H. ARNOLD, M.B.	1892-3-4.
	FLETCHER, H. M., M.A., M.D.	1892-3-4-5.

* Consulting Physician or Surgeon.

Name of Hospital.	Name of Vivisector, or Pro-Vivisector.	Years in which a License (if any) was held.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.	EVE, F. S., F.R.C.S., &c. FENWICK, WM. SOLTAU, M.D., B.Sc. TUBBY, ALF. H., M.B.	1885-6-7-8-9-90-1-2. 1892-3-4-5. 1889-90-1-2-3-4-5.
GENERAL LYING-IN HOSPITAL, York road, Lambeth, S.E.	LISTER, SIR J., Bart., M.D., F.R.C.S.*	
GOVERNESSES' BENEVOLENT INSTITUTION, 32, Sackville Street, W.	STEPHEN PAGET, F.R.C.S.	1892.
GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.	LOCKWOOD, C. B., F.R.C.S. REMFREY, LEONARD, M.A., M.D.	1890-1-2-3-4-5. 1894.
GUY'S HOSPITAL, St. Thomas's Street, Borough, S.E.	GOLDING-BIRD, CUTHBERT HILTON, M.B. PYE-SMITH, PHILIP HY., M.D. STEVENSON, THOMAS, M.D., F.R.C.S. WHITE, WILLIAM HALE, M.D., &c. WASHBOURN, JOHN W., M.D. STARLING, E. H., M.B. LANE, WILLIAM ARBUTHNOT, F.R.C.S. PAVY, FREDK. WM., M.D. FAWCETT, JOHN, M.D. LEATHES, J. B., M.B. TURNER, GEORGE, M.B.	1881-4-5-6-7-8-9-90. 1878-9-90-1-2-3-4. 1881-2-3-5-6-7-8-9-90-1-2-3-4-5. 1887-8-9-90-1-2-3-4-5. 1889-90-1-2-3-4-5. 1890-1-2-3-4-5. 1891-2-3. 1892-3-4-5. 1893-4-5. 1894-5. 1895.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.	ACLAND, THEO. DYKE, M.D. HABERSHON, S. H., M.D. LISTER, SIR J., Bart., M.D., F.R.C.S.* MARTIN, S. H. C., M.D.	1891-2-3-4-5. 1892-3. 1887-8-9-90-1-2-3-4-5. 1892-3-4-5.
HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars ..	TIMS, HY. WM. MARETT, M.D. ABRAHAM, PHINEAS, M.D., B.Sc.	1892-3-4-5. 1892-3.
HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.	WOLFENDEN, RICHARD NORRIS LACK, H. L., M.D.	1881-2-5-6-7-8. 1894-5.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C., and Cromwell House, Highgate, N.	BALLANCE, CHAS. A., M.B. LANE, WILLIAM ARBUTHNOT, F.R.C.S. FLETCHER, H. M., M.D. BOWMAN, HY. MOORE, M.D.	1886-7-8-9-90-2-3-4-5. 1891-2-3. 1892-3-4-5. 1894-5
HOSPITAL FOR EPILEPSY AND PARALYSIS, Portland Terrace, Regent's Park, N.W.	BENNETT, ALEX. HUGHES, M.D., M.R.C.P.	
HOSPITAL FOR PARALYSIS AND EPILEPSY, Queen Square	TURNER, WM. ALDREN, M.D. BUXTON, DUDLEY WILMOT, M.D., B.Sc.	1891-2-3-4-5. 1891-2-3-4-5.
ITALIAN HOSPITAL, 41, Queen Square, W.C.	FAYRER, SIR J.	1878.
KING'S COLLEGE HOSPITAL, Portugal Street, Lincoln's Inn	BEEVOR, SIR H., Bart., M.R.C.S. CHEYNE, WILLIAM WATSON, M.B., F.R.C.S. FERRIER, DAVID, M.D., F.R.S. LISTER, SIR JOSEPH, Bart., M.D., F.R.C.S.* CROOKSHANK, E. M., M.D., &c. (King's College) MARTIN, CHAS. J., M.R.C.S. (King's College) CHEATLE, GEO. L., F.R.C.S. HALLIBURTON, WM. D., M.D. TURNER, WM. ALDREN, M.D. LACK, H. L., M.D. LAWSON, KENNETH, M.R.C.S. SMITH, W. R., M.D., D.Sc. ILLINGWORTH, C. R., M.D.	1891-2-3-4. 1880-1-2-3-4-5-6-7-8-91-2-3-4-5. 1882-3-9-90-1-2-3-4-5. 1887-8-9-91-3. 1889-90-1. 1892-3-4-5. 1887-8-9-90-1-2-3-4-5. 1891-2-3-4-5. 1894-5. 1894-5. 1895. 1895.
LOCK HOSPITAL, Female, and Asylum, Westbourne Green, Paddington	COTTERELL, EDWARD, F.R.C.S., L.R.C.P.	1891-2-3-4.
" " Male, 91, Dean Street, Soho, W.	SIEVEKING, SIR E. H., M.D., &c.* SIEVEKING, SIR E. H., M.D., &c.* COTTERELL, EDWARD, F.R.C.S., L.R.C.P.	
LONDON FEVER HOSPITAL, Liverpool Road, N.	WASHBOURN, JOHN W., M.D., &c. HUNTER, WILLIAM, M.D.	1891-2-3-4. 1889-90-1-2-3-4-5. 1891-2-5.
LONDON HOSPITAL, Mile End, E.	EVE, FREDERIC S., F.R.C.S., &c. DEAN, HY. PERCY, B.Sc., F.R.C.S. HUTCHINSON, JONATHAN, LL.D., F.R.C.S.* FENWICK, W. S., M.D.	1885-6-7-8-9-90-1-2. 1888-9-90-1-2-3-4-5. 1894-5.
METROPOLITAN CONVALESCENT INSTITUTION, 32, Sackville Street, W.	PYE, WALTER, F.R.C.S.	1878-9-84-90.
METROPOLITAN DISPENSARY, 9, Fore Street, Cripple-gate, E.C.	HARRIS, VINCENT DORMER, M.D. POWER, D'ARCY, M.B., &c. TOOTH, HOWARD HY., M.D. HAIG, A., M.D. WARING, HOLBURN JACOB, B.Sc., M.B. PAGET, STEPHEN, M.A., F.R.C.S. RUSSELL, J. S. R., M.D. CAUTLEY, E., M.D. BAILEY, R. C., M.B. WETHERED, FRANK JOSEPH, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5 1892-3-4-5. 1891-2-3. 1891-2-3-4. 1891-2-3-5. 1892. 1894-5. 1892-3-4-5. 1891-2-3-4-5. 1892.
METROPOLITAN HOSPITAL, Kingsland Road, N.E.		
MIDDLESEX HOSPITAL, Berners Street, W.		

* Consulting Physician or Surgeon.

Name of Hospital.	Name of Vivisector, or Pro-Vivisector.	Years in which a License (if any) was held.
NATIONAL DENTAL HOSPITAL, W.	LOW, HAROLD, M.B.	1894-5.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.	BALLANCE, C. A., M.B.	1886-7-8-9-90-2-3-4-5.
	BRADFORD, JOHN ROSE, D.Sc., M.D.	1891-2-3-4-5.
	FERRIER, DAVID, M.D., &c.	1882-3-9-90-1-2-3-4-5.
	HORSLEY, VICTOR A. H., F.R.C.S.	1881-2-3-4-5-6-7-8-9-90-1-2-3-4-5.
	TOOTH, HOWARD HY., M.D.	1891-2-3.
	BUXTON, DUDLEY WILMOT, M.D., B.S.	1891-2-3-4-5.
NATIONAL ORTHOPEDIC HOSPITAL	TUBBY, ALF. H., M.B., F.R.C.S.	1889-90-1-2-3-4-5.
NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead	LISTER, SIR J., BART., M.D., F.R.C.S., &c.*	1892-3-4.
	SQUIRE, J. EDWARD, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5.
	CHEYNE, WM. WATSON, M.B., F.R.C.S.	1888-9-90-1-2-3-4-5.
NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.	DEAN, HY. PERCY, M.R.C.S.	
NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.	CLARKE, J. J., M.B.	1892-3-4-5.
	SIBLEY, W. K., B.A., &c.	1899-90-1.
PADDINGTON GREEN CHILDREN'S HOSPITAL, W. (See Children's Hospital.)		
PIMLICO ROAD FREE DISPENSARY, 20, Pimlico Road, S.W.	RINGER, SYDNEY, M.D.	1878-9-84-5.
	WELLS, SIR T. SPENCER, Bart.*	
QUEEN'S JUBILEE HOSPITAL, Earl's Court	BOKENHAM, T. J., M.R.C.S.	1891-2-3-4-5.
ROYAL FREE HOSPITAL, Gray's Inn Road, W.C. ..	CALVERT, JAMES, B.A., M.D.	1892-3-5.
	ANDREWES, FREDK. W., M.R.C.S.	1892-3-4-5.
ROYAL GENERAL DISPENSARY, 25 and 26, Bartholomew Close, E.C.	JESSETT, FRED. B., F.R.C.S., &c.	1891-2-3.
ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.	HAIG, A., M.D.	1891-2-3-4.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.	CALVERT, JAMES, B.A., M.D.	1892-3-5.
ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.	BOWMAN, HY. MOORE, M.D.	1894-5.
	BATTEN, RAYNER DERRY, M.D.	1837-8-9-90-1-2-3-5.
	BOKENHAM, THOS. JESSOPP, M.R.C.S.	1891-2-3-4-5.
	COLLINS, ED. TREACHER, F.R.C.S.	1892.
	MARSHALL, C. DEVEREUX, F.R.C.S.	1892-3-4-5.
	MACLEHOSE, NORMAN M., M.B.	1894-95.
	WELLS, SIR T. SPENCER, Bart.*	
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Seymour Street, Portman Square, W.	BRUNTON, THOMAS LAUDER, M.D., F.R.C.S. ..	1878-9-80-1-2-3-4-5-6-7-8-91-3-4.
ST. BARTHOLOMEW'S HOSPITAL, West Smithfield, E.C.	JESSOP, W. H. H., F.R.C.S., &c.	1885-6-7-8-9.
	KLEIN, EDWARD EMANUEL, M.D.	1884-5-6-7-8-9-90-1-2-3-4-5.
	BOWLBY, ANTHONY ALFRED, F.R.C.S.	1887.
	PAGET, SIR JAMES*	
	SHORE, T. W., M.D.	1888-9-90-1.
	LOCKWOOD, C. B., F.R.C.S.	1890-91-2-3-4-5.
	BAILEY, ROBT. COZENS, M.R.C.S.	1891-2-3-4-5.
	HAYWARD, J. A., M.D.	1894-5.
	WARING, H. J., B.Sc., M.B.	1891-2-3-5.
	JONES, HENRY LEWIS, M.D.	1891-2.
	CALVERT, JAMES, B.A., M.D.	1892-3-5.
	ANDREWES, FREDK. W., M.R.C.S.	1892-3-4-5.
	FLETCHER, HERBERT M., M.A., M.B.	1892-3-4-5.
	POWER, D'ARCY, M.B.	1892-3-4-5.
	TOOTH, HOWARD HY., M.D.	1891-2-3.
	EDKINS, J. SYDNEY, M.A., M.B.	1894-5.
	KANTHACK, A. A.	1894-5.
	BOWMAN, HY. MOORE, M.D.	1894-5.
	BOUSFIELD, ED. C., L.R.C.P.	1895.
	WHITE, CHARLES POWELL, M.D.	1895.
	BATTEN, RAYNER DERRY, M.D.	1887-8-9-90-1-2-3-5.
ST. GEORGE'S HOSPITAL, Hyde Park Corner, S.W.	FURNIVAL, PERCY, F.R.C.S.	1895.
	REMFREY, LEONARD, M.A., M.D.	1894.
	SLATER, CHARLES, M.B.	1894-5.
ST. JOHN'S HOUSE NURSING INSTITUTION, 8, Norfolk Street, Strand, W.C.	TURNER, WM. ALDREN, M.D.	1891-2-3.
ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.	BEEVOR, SIR H., Bart., M.R.C.S.	1891-2-3-4.
ST. MARY'S HOSPITAL, Cambridge Place, Paddington Green, W.	SQUIRE, J. EDWARD, M.D.	1892-3-4.
	BUXTON, DUDLEY WILMOT, M.D., B.S.	1891-2-3-4-5.
	PYE, WALTER, F.R.C.S.	1878-9-84-90.
	SIEVEKING, SIR EDWARD HENRY, M.D., F.R.C.P.*	
	LUFF, ARTHUR PEARSON, M.D., B.Sc., F.C.S., F.I.C.	1893-4-5.
	WALLER, AUGUSTUS, M.D.	1884-5-95.
	SYMES, WILLIAM L., M.R.C.S.	1891-2-4-5.
	CLARKE, J. JACKSON, M.B., F.R.C.S.	1892-3-4-5.
ST. PANCRA'S DISPENSARY	ELLIOTT, A., M.D.	1894-5.
ST. SAVIOUR'S HOSPITAL	RUSSELL, J. S. R., M.D.	1894-5.
ST. THOMAS'S HOME, St. Thomas's Hospital ..	EDMONDS, WALTER, M.A., M.D. (Res. Med. Officer)	1891-2-3-4.

* Consulting Physician or Surgeon.

Name of Hospital.	Name of Vivisector, or Pro-Vivisector.	Years in which a License (if any) was held.
ST. THOMAS'S HOSPITAL, Albert Embankment, Westminster Bridge, S.E.	CRANSTOUN CHARLES T., M.D. BALLANCE, C. A., M.B., &c. ACLAND, THEODORE DYKE, M.D. LOW, HAROLD, M.B. TURNER, GEORGE, M.B. SHATTOCK, SAM'L. G., F.R.C.S. GRÜNBAUM, A.S.F., B.A. BRADFORD, J. ROSE, M.D. HORSLEY, VICTOR A. H., F.R.C.S., &c. MARTIN, S. H. C., M.D. RINGER, SYDNEY, M.D. BUXTON, DUDLEY WILMOT, M.D., B.S. BAYLISS, WILLIAM M., B.A., B.Sc. HAYCRAFT, JOHN BERRY, M.B., B.Sc. HARLEY, VAUGHAN, M.D. DEAN, HENRY P., B.Sc., M.R.C.S. TIMS, H. W. M., M.D. MARSHALL, CHAS. DEVEREUX, F.R.C.S. POWER, D'ARCY, M.B., &c.	1878-9. 1886-7-8-9-90-2-3-4-5. 1891-2-3-4-5. 1894-5. 1878-9-93. 1895. 1890-1-2-3-5. 1891-2-3-4-5. 1881-2-3-4-5-6-7-8-9-90-1-2-3-4-5. 1887-8-9-90-1-2-3-4-5. 1878-9-84-5. 1891-2-3-4-5. 1890-1-2-3-4-5. 1887-8-9-90-1-2-3-4-5. 1893-4-5. 1888-9-90-1-2-3-4-5. 1892-3-4-5. 1892-3-4-5. 1892-3-4-5.
UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.	LOW, HAROLD, M.B. BENNETT, ALEXR. HUGHES, M.D., M.R.C.P. COTTERELL, EDWARD, F.R.C.S., L.R.C.P. PAGET, STEPHEN, M.A., F.R.C.S. CHEATLE, GEO. L., F.R.C.S. TURNER, WM. ALDREN, M.D. HUNTER, WM., M.D. BATTEN, RAYNER DERBY, M.D.	1894-5. 1891-2-3-4. 1892. 1892-3-4-5. 1891-2-3-4-5. 1891-2-5. 1887-8-9-90-1-2-3-5.
VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea, S.W.	ABRAHAM, PHINEAS M.D., B.Sc. EDDOWES, ALFRED, M.D. MURRELL, WM., M.D., &c. SPENCER, W. G. F.R.C.S. TIMS, H. W. MARETT, M.D. COPEMAN, S.M., M.A., M.D. BLAXALL, F. R., M.D. TUBBY, ALF. H., M.D.	1892-3. 1893-4. 1878. 1888-9-90-1-2-3-4-5. 1892-3-4-5. 1891-2-3-4-5. 1894. 1889-90-1-2-3-4-5.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck Street, W.		
WEST LONDON HOSPITAL, Hammersmith Road, W.		
WESTERN OPHTHALMIC HOSPITAL, 153 and 155, Marylebone Road, N.W.		
WESTERN SKIN HOSPITAL, 179, Great Portland Street, W.		
WESTMINSTER HOSPITAL, S.W.		
THE PROVINCES.		
BIRKENHEAD— FEVER HOSPITAL WIRRAL HOSPITAL FOR SICK CHILDREN	VACHER, FRANCIS, F.R.C.S., &c. VACHER, FRANCIS, F.R.C.S., &c.	1878. 1878.
BOURNEMOUTH— NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST	ACLAND, THEO. DYKE, M.D.	1891-2-3-4-5.
BRISTOL— ROYAL INFIRMARY	EDGEWORTH, FRANCIS HENRY, M.B., B.A. ..	1892-3.
CAMBRIDGE— ADDENBROOKE'S HOSPITAL	GRIFFITHS, JOSEPH, M.D.	1894-5.
ERITH— ERITH, CRAYFORD, AND BELVEDERE COTTAGE HOSPITAL	JESSETT, F. B., F.R.C.S., &c.	1891-2-3.
LEEDS— GENERAL INFIRMARY PUBLIC DISPENSARY	TREVELYAN, EDMOND F., M.D. TREVELYAN, EDMOND F., M.D.	1894-5. 1894-5.
LEYTONSTONE— THE CHILDREN'S HOME	ACLAND, THEODORE DYKE, M.D.	1891-2-3-4-5.
LIVERPOOL— ROYAL INFIRMARY AND LOCK HOSPITAL DENTAL HOSPITAL NORTHERN HOSPITAL	PAUL, FRANK T., F.R.C.S. ROBERTS, H. LESLIE, M.B. PAUL, FRANK T., F.R.C.S. HARRISON, DAMER, F.R.C.S. HOME, GEORGE, M.B.	1891-2-3-4-5. 1892-3-4-5. 1891-2-3-4-5. 1893-4-5. 1894.
MANCHESTER— ANCOATS HOSPITAL AND ARDWICK AND ANCOATS DISPENSARY HOSPITAL FOR CONSUMPTION AND DISEASES OF THROAT, Hardman Street, Deansgate EAR INSTITUTE ROYAL INFIRMARY AND DISPENSARY	BISHOP, EDWD. STANMORE, F.R.C.S., &c. HARRIS, THOMAS, M.D. MILLIGAN, WM., M.D. MILLIGAN, WM., M.D. DRESCHFIELD, JULIUS, F.R.C.P. HARRIS, THOMAS, M.D.	1885-6. 1887-93-4-5. 1894-5. 1894-5. 1884-6-7-8-9-90. 1887-93-4-5.
NEWCASTLE-ON-TYNE— DISPENSARY ROYAL INFIRMARY FLEMING MEMORIAL HOSPITAL FOR DISEASES OF CHILDREN	OLIVER, THOS., M.D., &c. OLIVER, THOS., M.D., &c. MURRAY, GEO. R., M.A., M.D. MURRAY, GEO. R., M.B.	1885-6-8-9-90-1-2-3-4-5. 1885-6-8-9-90-1-2-3-4-5. 1892-3-4-5. 1892-3-4-5.

* Consulting Physician or Surgeon.

Name of Hospital.	Name of Vivisector, or Pro-Vivisector.	Years in which a License (if any) was held.
NOTTINGHAM—		
DISPENSARY	TRUMAN, E. B., M.D.	1882-3-4-5-6-7-8-9-90-1-2.
NOTTINGHAM AND MIDLAND EYE INFIRMARY ..	TRUMAN, E. B., M.D.	1882-3-4-5-6-7-8-9-90-1-2.
SAMARITAN HOSPITAL FOR WOMEN, Raleigh Street	TRUMAN, E. B., M.D.	1882-3-4-5-6-7-8-9-90-1-2.
OXFORD—		
RADCLIFFE INFIRMARY	BROOKS, W. T., M.R.C.S., &c.	1884.
SALFORD—		
ROYAL HOSPITAL AND DISPENSARY	MANN, J. D., M.D., &c.	1888.
SHEFFIELD—		
JESSOP HOSPITAL FOR WOMEN	HIME, T. WHITESIDE, M.D., &c.	1886-7.
VENTNOR—		
ROYAL NATIONAL HOSPITAL FOR CONSUMPTION	HARRIS, VINCENT DORMER, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5
WAKEFIELD—		
WEST RIDING ASYLUM	LEWIS, WM. BEVAN, M.R.C.S.	1891-2.
	GOODALL, EDWIN, M.D.	1891-2-3.
WOODFORD (Essex)—		
LONDON CO. ASYLUM (Claybury)	COOPER, CHAS. DUDLEY, M.R.C.S. (Assistant Medical Officer)	1893.
SCOTLAND.		
ABERDEEN—		
ROYAL INFIRMARY	OGSTON, ALEX. M.D.	1880-1-2.
	HAMILTON, DAVID JAMES, M.B., &c.	1886-7-95.
EDINBURGH—		
DEACONESS HOSPITAL	THOMSON, HY. ALEXIS, M.B.	1893-4.
DENTAL HOSPITAL	CULLEN, G. M., M.B.	1891-2.
	LUNDIE, WILLIAM, M.B., C.M.	1892-3.
NEW TOWN DISPENSARY	BOYD, FRANCIS D., M.D.	1892-3-4-5.
	W. G. W. SANDERS, M.B.	1893-4.
	ABERNETHY, ROBT., M.D.	1894-5.
	STOCKMAN, R., M.D.	1884-95.
PROVIDENT DISPENSARY	CULLEN, GEO. M., M.B.	1891-2.
ROYAL INFIRMARY	RUSSELL, W., M.D. (Visiting Physician, Queensbury House)	1891-2-3-4.
	FRASER, THOS. RICHARD, M.D., &c.	1878-9-81-2-5-6-9-90-1-5.
	GREENFIELD, W. S., M.D., &c.	1879-80-1-7-8.
	MCBRIDE, PETER, M.D., &c.	1879-80.
	HODSDON, J. W. B., M.D., &c.	1886-7.
	LEITH, ROBT. F. CALDER, M.A., M.B.	1892-3.
	PHILIP, ROBT. WM., M.A., M.D.	1892-3-4-5.
	STOCKMAN, R., M.D.	1884-5-6-7-8-9-90-1-2-3-4-5.
	THOMSON, HY. ALEXIS, M.B., B.Sc.	1893-4.
	BOYD, FRANCIS D., M.D.	1892-3-4.
	MUIR, ROBT., M.D.	1894.
ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL	MURRAY, ROBERT MILNE, M.B., F.R.C.P.	1882-3-4-5-6-7-9-90-1-2-3-4.
VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST	PHILIP, ROBT. WM., M.A., M.D.	1892-3-4-5.
WESTERN DISPENSARY	H. A. THOMSON, M.B.	1893-4.
GLASGOW—		
OPHTHALMIC INSTITUTION	ROBERTSON, JOSEPH MCG., M.B. and C.M.	1885-6-7.
ROYAL HOSPITAL FOR SICK CHILDREN, Scott St.	COATS, JOSEPH, M.D.	1878-9-82-3-90-1-2-3-4-5.
	WORKMAN, CHAS., M.D.	1892-3-4-5.
	STEVEN, JOHN LINDSAY, M.D.	1892-3-4-5.
ROYAL INFIRMARY	BARLOW, JOHN, M.D.	1878-9-80-3-4-9-90-1-2-3-4-5.
	NEWMAN, DAVID, M.D.	1879-81-2-3.
	WORKMAN, CHAS., M.D.	1892-3-4-5.
	STEVEN, JOHN LINDSAY, M.D.	1892-3-4-5.
	MCGREGOR, ANDREW N., M.D.	1893.
TRAINING HOME FOR NURSES	MACLENNAN, WM., M.B.	1891-2-3-4-5.
SICK POOR AND PRIVATE NURSING ASSOCIATION	STEVEN, JOHN LINDSAY, M.D.	1892-3-4-5.
VICTORIA INFIRMARY	MAYLARD, A. E., M.B., &c.	1888.
WESTERN INFIRMARY	COATS, JOSEPH, M.D.	1878-9-82-3-90-1-2-3-4-5.
	BEATSON, GEO. THOS., M.D.	1879.
	NEWMAN, DAVID, M.D.	1879-81-2-3.
	MAYLARD, A. E., M.B., &c.	1888.
	MACLENNAN, WM., M.B.	1891-2-3-4-5.
CANCER HOSPITAL	BEATSON, GEO. THOS., M.D.	1879.
IRELAND.		
BELFAST—		
ROYAL HOSPITAL	SMITH, J. LORRAIN, M.D.	1895.
DUBLIN—		
SIR PATRICK DUN'S HOSPITAL	PURSER, JOHN MALLET, M.D.	1878-9-83-4-5-6-7-8-9-90-1-2-3-5.
ST. VINCENT'S HOSPITAL, Stephen's Green	QUINLAN, FRANCIS JOHN BOXWELL, M.D.	1883-4-5-6-7-8-9-90.
MATER MISERICORDIÆ HOSPITAL	M'WEENY, EDMOND J., M.D.	1891-2-3-5.
NATIONAL LYING-IN HOSPITAL	M'WEENY, EDMOND J., M.D.	1891-2-3-5.

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 7.]

LONDON, NOVEMBER 2, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid. All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

At a recent meeting of the Executive Committee at Victoria Street, Dr. Berdoe reported the receipt of news through Mrs. Fairchild Allen, of Aurora, Illinois, that vivisection had been abolished in the University of California.

Speaking in a discussion at the late Homœopathic Congress in London, Mr. J. S. Hurndall, veterinary surgeon, praised *tuberculin* as a diagnostic agent, and related that a considerable herd of cows had been tested with it for tuberculosis. More than 100 cows re-acted to the test, he added, and on being slaughtered they were found to be infected with the disease. We noticed this statement with regret, and were disappointed that no homœopathic doctor got up to point out that it was within the range of possibility that the test might have caused the infection. It is admitted that the injection of tuberculous virus sets up disease in parts of the animal body where it was previously non-existent.

ACCORDING to a telegram from Frankfort, in the *Daily News* of September 24th, a new treatment of

tuberculosis was announced, but accompanied by a warning against optimism regarding its efficiency. It was Lord Durham who pointed out some time ago how cruel it is to people afflicted with the malady to announce cures for consumption which turn out to be nothing of the kind. In this case the warning against the "cure" accompanies the announcement of it. Let us hope that soon the announcement of these bogus guides to short cuts to recovery will be suspended altogether.

WE are bound to give credit to the *Lancet* for unfalteringly recording the truth in regard to diphtheria in London. Unfortunately, in spite of the use of the much-vaunted anti-toxin, and all the other remedies the medical profession can apply, it goes on increasing. Referring to the four weeks ended September 7th, the *Lancet* (September 26th) said—

"If we compare this period with the corresponding four weeks of 1895 we see that we are in this current year in much worse case than last year. In the four weeks ended September 7th, 1895, there were only 311 notified cases and 152 registered deaths, but a per case mortality, nevertheless, of 18·7 per cent. The per case mortality of this year was 18·4, and the number of deaths 199.

The *British Medical Journal* (Oct. 10th) carries this serious subject further, by saying—

"There has recently been a marked increase in the prevalence of diphtheria in London. No fewer than 69 fatal cases of this disease were registered last week, the numbers in the three preceding weeks having been 48, 49, and 61 respectively. This is the highest number recorded in any week during the current year."

Now, the *Medical Journal* was the one to puff the anti-toxin treatment of diphtheria from the first, and struggled hard to set it firm on its legs, because, no doubt, it was alleged to be a benefit derived from vivisection. But now, the *Journal* itself practically confesses the powerlessness of the medical profession to stem the rising death-rate either with anti-toxin or anything else. This high mortality is most deplorable, and shows how impotent are those who so glibly dub themselves scientists—as the Vivisectors do—in the presence of any really difficult problem of disease causation and prevention. The experience they are having ought to teach them, if anything will, that they are entirely on the wrong tack.

A FLAGRANT example of the stupid character of some of the cruel experiments of the bacteriologists is given in the *Veterinarian* for October (p. 748), where we read that "Rabbits were deprived of all food for ten days," and at the end of this time it was found that "the bactericidal properties of the blood had disappeared or were at least notably diminished." The normal condition of the

blood was restored by feeding the animals. This could only prove that properly-fed animals can resist disease better than starved ones, a fact that it hardly needed bacteriology to teach us.

THE French Academy of Sciences has instituted an inquiry into a new method of healing consumption by the use of "electricity and antiseptics." Dr. Crotte declares that by this system he has been able to cure six hundred out of eight hundred phthisical patients who had been given up as incurable. The physiologists are experimenting largely on the physiological action of electrical currents, but as they have been doing this for generations without much practical result, we have little confidence in the electricity and less in the antiseptics.

THE bacteriologist and the cholera-goddess seems at first sight an odd alliance, but as explained by Mr. E. H. Hankin in his article in the *Nineteenth Century* for October, "On Bhowáni and Hindoo Sanitation," it is scientific and reasonable enough. Mr. Hankin is employed by the Indian Government in checking the march of the cholera in India by disinfecting the wells. He does this very effectually, it would seem, by means of permanganate of potash, and he has overcome native prejudice against putting English medicine in the drinking water by convincing the people that he is carrying out the wishes of the goddess of cholera, who seems to be an ancient sanitarian lady whose bacteriological knowledge was quite up to the modern standard. Bhowáni is believed to be angry if outsiders go into a village when cholera is present. She objects to medicine, feasting, fatigue, and indulgence at such times, and as Mr. Hankin pertinently asks, What is this worship of Bhowáni but a sanitary precaution? She likes "holy water" too, so Mr. Hankin explains that water cannot be "holy" if it be dirty and full of cholera-microbes. The waters of the Ganges and Jumna appear to be particularly "holy," that is to say, antagonistic to the life of disease germs, and the bacteriologist allying himself with Bhowáni is doing good service in providing the poor Indian with pure water. All this strikes us as much more practical and praiseworthy than propagating disease by inoculation.

THE Spanish have a proverb, "What the fool does at length the wise man does at the beginning." We should have to reverse this if we spoke in similar terms of physiologists and ordinary doctors. We may say that what the practitioner does at first the experimental physiologist does after a good deal of circumambulation. The *Medical Chronicle* (edited by the professors of Owen's College, Manchester), in its September issue, gives us a remarkable instance of experimental unwisdom. Certain foreign physiologists lately discovered by a long course of experiments on animals that it is all a mistake to suppose that the various preparations of iron used in medicine so successfully are of any value, as they were able to demonstrate that they are never absorbed, but pass out of the system in exactly the same quantity in which they are taken in. If any good effect resulted it was gravely asserted to be due to suggestion.

THIS would have taken away the breath of the family doctor if he had ever paid the slightest attention to the nonsense written by the modern physiologists. As it was he went on giving Parish's Chemical Food and Steel Wine to his anæmic and delicate patients, and happily

curing them all, ignorant of the dicta of the experimenters. And now our English researchers, says Dr. Leach, have performed all the experiments with the iron salts over again, and they prove in their turn that the intestines absorb the iron and store it up in the liver. The iron aids the formation of hæmoglobin in the red corpuscles of the blood. Once more then the word of command from the physiological laboratory is "As you were!"

DR. LEACH, in the article referred to above, says of an experimenter, "He points out that his experiments have been made with rabbits fed with oats and carrots. It does not follow, of course [there is a world of meaning in that "of course"], that what takes place in the rabbit thus fed takes place in man." Certainly *we* never imagined anything of the kind. Yet to our amazement we are told a few lines lower down by the writer of the above that "what takes place in the mouse, rabbit, and other animals also probably takes place in man, though there may be slight differences in the exact method of absorption and excretion between man and other animals." We should rather think there are!

HERE, for example, we have physiologists asking each other, "Does the rabbit perspire?" Luchsinger, after a series of experiments, said "No." Then M. Lecercle, having repeated them, said "Yes"; although he admitted that even with so powerful a sweat-producer as pilocarpine much larger doses in proportion to body weight are required than in most other animals. It is well-known also that rabbits cannot vomit.

THE beneficial action of the thyroid treatment has been discovered to be due to the iodine contained in the gland, but the discoverers admit that their experiments give "conflicting results." We fancy we have seen that phrase before!

THE Indian mongoose is said to cure itself of the effects of snake-bite by eating the leaves of the *Mimosa octandra*. It has, however, been discovered that Nature has conferred immunity against snake-poison on various animals, the mongoose amongst others. The *Veterinarian* for September says (p. 688), that the hedgehog possesses this immunity against viper bites to such an extent that it can resist several attacks in succession. The blood of the hedgehog is poisonous to the guinea-pig, but the serum of the blood confers immunity on this animal, so that it can resist a mortal dose of venom. The protection, however, lasts but a few hours. Protective inoculations would, therefore, seem to be of a very fugitive character, and may prove dangerous by leading those who submit to them to a false sense of security.

THE latest inoculation fad is vaccination of the soil. "Nitragine" (no connection with the gas of a somewhat similar name) is being sold as a new fertiliser to provide the bacteria necessary for the growth of plants. Leguminous plants in perfect health are declared to have certain bacteria in their rootlets which are necessary for their well-being, and these are conferred by vaccinating the earth with the new material.

THEMISON of Laodicea, a famous physician who lived B.C. 50, wrote many important treatises on medicine. His biographers say that he would have written upon hydrophobia, but having in his youth once seen a case,

it so frightened him that he was attacked with some of the symptoms, and dreaded a relapse if he set himself to write about it. By the way, probably few persons are aware that the dog-rose is so called because its roots, according to Pliny, were believed to be a specific for hydrophobia resulting from the bite of a mad dog.

LEPROSY is now treated by the serum or anti-toxin method. The serum is first obtained from a leprous patient and then used upon a sound horse, and the matter is then in its turn injected into leprous patients. "Promising results" are said to have been obtained. We know these promises; they come from the bacteriologists in a daily lengthening series.

IN September and October last there was a lengthy and at times excited correspondence in the pages of the *Lancet* on the merits and demerits—mainly the latter—of the General Medical Council, the governing body, under the law, of the medical profession. The leading writers on one side were Dr. A. G. Welsford and Mr. V. Horsley; on the other Mr. R. Brudenell Carter was prominent. The letters written ran again and again to an inordinate length. As to their strength, in his issue for October 3rd the editor of the *Lancet* put a stop to the correspondence with the following unflattering comment:—

"We cannot but regret that many of the letters have contained expressions of such a bitterly personal nature. Neither the cause of medical reform nor the elucidation of the Medical Acts is furthered by accusations of mendacity and other crimes. Certain gentlemen whose letters have not been published are requested to understand that they have entirely transgressed the bounds of what we consider to be decent criticism."

Evidently the *Lancet* does not agree that medical ethics consist in a repetition of what occurred at the Carlisle Congress—"the washing of soiled linen in public." And quite right too. But what a reflection is the editor's note on those he terms "gentlemen."

SOMETHING even finer than the above as a criticism of Mr. Horsley's methods appeared in the issue of the *Lancet* already mentioned. Mr. R. Brudenell Carter had been answering one of Mr. Horsley's attacks in a letter filling more than a page of the *Lancet*. In this letter he had rubbed in a good deal of what might be called "caustic liniment" for his opponent. Having answered that opponent's (*i.e.* Mr. Horsley's) allegations point by point, he closed with the following uncompromising statement:—

"The farrago of rubbish and falsehood, the meanness and malignancy of which I have, I think, sufficiently exposed, is connected together by coarse personalities and vulgar abuse, such as are no longer tolerated in any decent society. I do not think it would be consistent either with my own dignity or with my professional position to continue a controversy which my opponent conducts in such a manner."

From this it is clear that Mr. Horsley's methods and language are disapproved by those who are not antivivisectionists, but who might be classed among his so-called "professional brethren."

A SERIOUS standing testimony of the impotence of the science of the vivisectioning laboratory to act effectively in the presence of a dreadful scourge, is to be found in the alarming increase of deaths from cancer. At an inquest in London the other week, several doctors swore that there was no cure for cancer, and according to the

Medical Chronicle for August, which published a communication from Mr. W. Roger Williams, F.R.C.S., the cancer mortality, which was 177 per million in 1840, rose to 676 in 1890, and 713 in 1894. The worst of it is that even the cause of cancer has not been made out, and in the absence of knowledge on the point, Mr. Williams gave utterance to the following highflown, but ambiguous theory:—

"When excessive quantities of such highly stimulating forms of nutriment [as meat] are ingested by persons whose cellular metabolism is defective, it seems probable that there may thus be excited in those parts of the body where vital processes are still active, such excessive and disorderly cellular proliferation as may eventuate in cancer."

An oracular utterance which may mean anything or nothing, but principally the latter. Add to all this helplessness the large number of confessedly "incurables" housed in various hospitals, and it is matter for wonder not only that the animal experimentalists are anywhere believed in, but that they have strength of mind to go on believing in themselves.

WE are glad to find we are not alone in our criticism on Sir Joseph Lister's address. Dr. Campbell Black, Professor of Physiology in Anderson's College, Glasgow, has communicated to the *Glasgow Herald* (Sept. 24th), and the *Medical Press* (Sept. 30th), trenchant letters (the latter of which we reproduce elsewhere) in which he proves that all the great points Sir Joseph made in his speech were not true. "It is not true," urges Dr. Black, "that wards of the Glasgow Royal Infirmary were 'the most unhealthy in the kingdom.'" Again, he says, "It is not true that Listerism ever converted the wards of the Royal Infirmary of Glasgow from the most 'unhealthy in the kingdom' to 'the healthiest in the world.'" Dr. Black proves by contemporary evidence that each of these allegations of Lister's is false. Moreover, he shows that "Listerism" is altogether a protean monstrosity. This is found very advantageous to its advocates, for no sooner does Lister recant with shame some essential doctrine of antiseptics than all his followers cry out, "Oh! that is not Listerism, it is something quite different."

In the *Medical Press* of October 7th, Dr. Campbell Black is well supported by a powerful letter from Dr. Granville Bantock, who maintains that "bacilli are the result and not the cause of disease," and that "the whole modern doctrine of bacteriology is a gigantic mistake, and sadly in need of revision." With regard to Listerism, he says:—

"Driven from pillar to post, bewildered with the multiplicity of changes, and staggered by the results obtained under a system in which all so-called antiseptic substances are 'conspicuous by their absence,' the advocates of Listerism now claim the doctrine of 'cleanliness' as their own, forgetting that there was a time when Lister affirmed that he did not aim at 'surgical cleanliness,' so confident was he as to the virtues of carbolic acid. But, as Dr. Campbell Black well says, 'Cleanliness is not Listerism.' It is, in fact, the very opposite."

But the letter will be found in full on another page.

DR. ROBERT A. FLEMING, M.D., F.R.C.P.E., communicates to the *British Medical Journal* of October 3rd, "Some Notes on Ascending Degeneration." Better known than these are experiments on descending degeneration, in which, after injuries to the brain, the effects on the nerves proceeding from the injured portions are studied. Dr. Fleming's experiments were

the converse of this; he injured nerves and studied the effects which ensued in the nerve trunk above the injury. Here is a summary of Dr. Fleming's exploits:—

"My own results are obtained from examining the central ends of divided or ligatured nerves of over seventy rabbits and dogs—mainly the former. These results are in brief: First, that in process of time a slow atrophy of 'motor' fibres occurs. Secondly, that certain 'sensory' fibres degenerate centrally, possibly because severed from their peripheral trophic centres. Thirdly, that the minute fibres found in a normal nerve undergo very marked change. Fourthly, that distinctive connective tissue increase occurs."

And here is the usual vote of thanks, which tells where the vivisections were performed:—

"In conclusion, I wish to tender my thanks to Sir Thomas Grainger Stewart and to Professor Hermann Munk, of Berlin, in whose laboratories the work referred to has been conducted."

THE experiments were severe enough, and the after-sufferings must have been great in many cases:—

"In a dog, eight months old, and three weeks after amputation, the greatest number of sciatic nerve fibres were unaffected, amongst those altered some are of normal size, some smaller, and some very specially so. . . . In another dog, one month old at the time of amputation and killed one year after, motor and sensory fibres are very different indeed. . . . An ascending neuritis may be very acute, rapidly spreading up to the cord affecting ganglion cells in the grey matter, and even extending up to the medulla, producing a fatal result; or it more commonly may be an acute, subacute, or extraordinarily chronic, but generally less disastrous, inflammation, the result of a less potent agent. How to produce the severe form we do not know; very probably it is microbic, but the less extensive variety is much more easily obtained than is often stated. Howell and Hubert rarely got it in dogs, as the result of nerve sections, crushing, etc. Traube found it only confined to nerves. Hayem got it by tearing out the sciatic of dogs; whereas other experimenters, as for example, Vulpian, very seldom, if ever, found it at all. . . . If dogs are apt to tear out stitches, cats are far worse, and therefore the results obtained by the experimental work on the nerves and spinal roots in these animals are open to some adverse comment. . . . A rabbit never picks out stitches from the hind limb, and if well cared for, there is little tendency to septic mischief. Hence I believe rabbits are more satisfactory for such experimental work than dogs."

DR. J. S. RISIEN RUSSELL, who keeps up the credit of the Vivisection Society as one of its "Research Scholars," reports in the *British Medical Journal* (October 3rd) a series of experiments on "The Effects of Interrupting Afferent and Efferent Tracts of the Cerebellum." These experiments consisted in exposing and cutting different portions of the cerebellum and medulla oblongata of animals, with accompaniments of absinthe injections and electric stimulations:—

"In one series of experiments the inferior peduncle of the cerebellum was divided on one side, and the results obtained in this way were controlled by experiments in which unilateral section of the lateral tracts of the medulla oblongata was performed, without injury to the pyramid or the posterior columns and their nuclei. Further control experiments consisted in dividing transversely the posterior columns and their nuclei a few millimetres above the *calamus scriptorius* on one side. In another series of experiments the electrical excitability of the two cerebral hemispheres was tested and compared after section of one inferior peduncle of the cerebellum, and after partial hemisection of the medulla, in which both pyramids were left intact. A third series of experiments dealt with the ways in which convulsions induced by the intravenous injection of absinthe were modified by division of an inferior peduncle of the cerebellum, by partial hemisection of the medulla in which the pyramid was the only structure left intact, and by transverse section of the posterior columns

and their nuclei, on one side, a few millimetres above the *calamus scriptorius*."

THE *Times* of September 29th had a very suggestive article on the proposed "Doctors' Union," which is now being actively canvassed in medical circles. That it is a trades-union pure and simple for the defence of medical interests is evident from the article in question, though the promoters of it delude themselves into the idea that it is all for the good of the public, and therefore is something quite different. There is no dispute that the movement has originated in the desperate competition for practice in the lower ranks of the profession which induces some practitioners to sell their services to clubs and other institutions at ridiculously low rates in order to cut out others.

AN energetic body of medical agitators, the article says, and this is the gist of the whole matter—

"Boldly maintain that it is only by a strong professional union, having for its sole object the regulation of the commercial interests of the profession, that the existing unsatisfactory conditions can be removed and the true dignity of the profession sustained."

THIS self-interested motive in the affair is illustrated by the following succinct account of the great midwives question which has seriously ruffled the professional doves of late:—

"A Bill has twice recently been introduced into Parliament, hitherto without success, with the object of insuring that women who undertake the duties of midwives shall possess a moderate knowledge of their work. The Bill proposes some simple tests of fitness and institutes a system of registration whereby the public may be able to recognize those who have fulfilled the requirements. From the point of view of humanity the measure appears to be a most desirable one, but it has been met by strenuous opposition on the part of large numbers of the medical profession. It is, alas! almost impossible to doubt that this opposition is in some degree prompted by a fear that qualified midwives would enter into competition with doctors and render the struggle for a living still more acute."

HERE are outlines of the proposed scheme itself:—

"The scheme which is now under consideration is a proposal to combine the entire profession in a union pledged not to accept less than a fixed *minimum* fee from any patient, and to refuse to attend any patient who is unable or unwilling to pay this fee, unless he is a subscriber to a general provident fund or a person entitled to Poor Law medical relief. Certain obvious exceptions to the operation of this rule would have to be arranged for, but they are strictly limited in number, and could be clearly defined."

That the writer of the article is under no illusion as to the essential nature of the scheme is plain, from the following passage:—

"At first sight it might seem an almost impossible task to persuade a body of employers, including practically the entire British population, that it could be to their advantage that their *employés* should combine to settle the rate of their remuneration."

But he urges, on the other hand, that the position of the medical profession is so peculiar that the task may not prove so impossible as it seems. Perhaps not; but we confess we doubt it. In the first place we do not believe that the whole profession will unite in the scheme. It is one thing to get an almost unanimous trades-union vote of the profession in favour of vivisection or vaccination when the *amour propre* of the profession is aroused against outside opinion and sentiment; it is quite another thing to secure unanimity on the question of fees.

EXHIBITION OF SPECIMENS OF VIVISECTIONS. THE PROJECT ABANDONED.

At a meeting held on the 7th of October, the Executive Committee of the Victoria Street Society decided to abandon the project several times mentioned in our columns, of organizing an exhibition of stuffed specimens illustrating the work of vivisectionists. The decision, which was unanimous, was arrived at with much regret, and only after careful deliberation. The main reason for it was that the result was found to be much less effective than was expected. Two specimens were prepared by the instruction of the committee, illustrating subjects in "Light in Dark Places." While no fault was to be found with the work of the taxidermist, the results, from the very nature of the circumstances were devoid of that which alone would make them effective or true representations, namely, *life*. The pleading look in the eyes, the quivering flesh, the feeble moan, the forgiving lick with the tongue, which accompany the reality, are absent, and the lifeless representations are but feeble caricatures. They were, and must ever remain, stuffed dogs and nothing more. A realistic representation, claiming to present the facts as they actually are, but unavoidably omitting the most essential element, could, it was felt, only have a contrary effect on the mind of the spectator to that intended.

A kindred difficulty was found in the fact that many of the most severe experiments are quite incapable of being even suggested by the external surroundings. A small wire, for instance, leading to a minute hole in the skull, or other parts of the body, would not suggest to any but the initiated the excruciating agonies of the passage of electric currents through the most sensitive nerves of the body. The only experiments which are really capable of realistic representation are those in which extensive mutilations are made. In these, with a plentiful use of blood-coloured wax, a sufficiently horrible effect could be produced, but it would be an effect of rather a spurious nature, as the blood spilt in legitimate operations is not different from that in unjustifiable experiments, and even in this respect it is difficult in the matter of dead bodies to equal the sights which we are all accustomed to witness daily in the butcher's shop. It is, after all, the pain and the injustice, not the blood, which marks the horror of the practice, and these cannot be put in tangible form in dead models.

Minor difficulties, which, if not insuperable, are yet very considerable, arise from the necessity of making the models accurate in physiological details. To insure this, the co-operation of a practical physiologist accustomed to the work is absolutely necessary, but almost impossible to secure. The appliances needed to fit up an exhibition are also very costly, and it is found that £500 would be a moderate estimate for carrying out the undertaking as at first contemplated.

Obituary.

LORD CONGLETON.

By the death of Lord Congleton, which took place at Folkestone, on the 18th ult., the Society has been deprived of one of its sympathetic vice-presidents. Lord Congleton, who had been ill for some time, at the date of his death was 87 years old. He had been a vice-president of the Society since May, 1887, and always took an interest in the Cause in which it is engaged, though not appearing prominently in the controversy.

MISS M. C. LLOYD.

With sincere sorrow we have to announce the death of this lady, who for the long period of 33 years had

been the close friend and constant companion of Miss Frances Power Cobbe. Miss Lloyd shared and helped to the uttermost of her power in the formation of the Victoria Street Society, and up to the time of her removal from London was an active member of the Central Executive Committee. On retiring from the Committee, she was elected an Honorary member—which did not prevent her continuing to subscribe handsomely every year—and so remained to the time of her death. Miss Lloyd expired at Hengwrt, Dolgelley, in North Wales (where she had a life interest in a large estate) on the 13th ult. By her side at the time was Miss Cobbe, to whom shortly before her demise she said, "Take care of yourself to work for the Cause." Miss Lloyd, who was 77 years of age, was buried at Llanelyd Church on the 19th of October.

THE REV. CHARLES GUTCH.

Our cause has lost an earnest supporter in the death, which we much deplore, of the Rev. Charles Gutch, B.D., which occurred at the Clergy House of St. Cyprian's, Marylebone, of which church he had been the incumbent for thirty years, on Thursday, October 1st, after but two days' illness. Mr. Gutch, who was Senior Fellow of Sidney Sussex College, Cambridge, was in his seventy-fifth year. For many years he had been a subscribing member of the Society, and for an even longer period had taken a warm interest in the Cause, and assisted it in various ways. He took a firm stand against vivisection, and was ever ready with his sympathy and help to further the contest against the practice. Though not known as a public speaker, he did much amongst all with whom he came in contact by making known to them the horrors of vivisection. We have lost in him a great and noble soldier in the cause of justice and of truth. On the occasion of his funeral on the 5th ult., his church, quaintly constructed and diminutive, was thronged by parishioners and friends, and the respect in which he was held by people in the district was evidenced by the fact that nearly all the shopkeepers in the vicinity of the church partially closed their premises. The Rev. G. A. Weekes came up from Cambridge to represent Sidney Sussex College. The body was subsequently conveyed to Finchley, and interred in the Marylebone Cemetery.

MISS JULIA GODDARD.

We also deeply regret to have to announce the death of Miss Julia Goddard, of Sutton Coldfield, near Birmingham, who had long been a supporter of the Society and Cause, and who, up to a few years ago, was its hon. correspondent for the neighbourhood in which she lived, and in frequent communication with headquarters. Miss Goddard always readily co-operated in every movement designed to advance the anti-vivisection cause. She did not confine herself to that, however, as she was the originator of a scheme for giving prizes to children, and about twenty years ago she persuaded the Birmingham School Board to introduce into the schools a scheme of prize-giving for kindness to animals, in which lessons were also given. The scheme worked satisfactorily, and is still continued, though on account of the requirements of the code on a modified scale. Mr. John Bright and the late Lord Shaftesbury gave the scheme their hearty approval, and an effort was made to induce the Education Department to make kindness to animals a code subject, but without success. Animal reading books have, however, of late years been sanctioned. Miss Goddard was also the author of several poems, and quite a large number of prose publications. She expired at her residence, at Little Aston, on the 3rd of September, and was buried at Edgbaston Old Church on the following Monday.

OUR CAUSE IN THE PRESS.

THE INTERESTS OF MAN AND BEAST.

(FROM THE "MANCHESTER GUARDIAN," OCTOBER 6TH.)

SIR,—In the report of your issue of yesterday of Lord Justice Lindley's recent address to the students of St. Thomas's Hospital the following passage occurs:—"One method of study employed in medicine was often attacked, namely vivisection; but those who would repeal the laws dealing with the subject were undertaking a vast responsibility. After weighing the matter carefully, he thought human judgment would be in favour of the human being." I fail to attach any meaning to the concluding sentence, unless it be that "human judgment"—i.e., that of Lord Justice Lindley and the gentlemen of his acquaintance—would be in favour of vivisection on the assumption (taken as a matter of course), and needing no argument) that the interests of "the human being" are advanced by that practice; and that it is only the interests of the animals which are put in the balance by anti-vivisectionists against those of their own kind.

Permit me, sir, most emphatically to disclaim, on behalf of the opponents of scientific torture, the position thus attributed to us of being merely zoophilists and not philanthropists at the same time, or of regarding the interests of beasts as equal to those of men. The implied sneer that such is our attitude is, I venture to think, unworthy of anyone who has "weighed the matter carefully" or read even a few of the publications and manifestoes of our societies. Scarcely can it have been possible for Lord Justice Lindley to have perused any of the speeches or pamphlets of our party (for example, those of his late colleague Lord Chief Justice Coleridge; or Bishop Mackarness on "Man and Beast," or Lord Shaftesbury's speeches in the House of Lords) without noting that it is quite as much on behalf of the true interests of humanity that we seek to abolish vivisection, as out of compassion for the brutes and sense of the great sin of torturing them. Does Lord Justice Lindley think that the noblest interests of man are really wrapped up in such secrets as vivisection can possibly solve? Is it the greatest benefit which can be done to a human being to cure his diseases, and perhaps add a few days or years to his span of life? Such may be "doctor's doctrine," and lawyer's doctrine, too; but only if they be of opinion that goodness, courage, sympathy, tenderness of heart and conscience are matters of no consequence, not to be weighed against an ache or compared to the value of a day of prolonged existence upon earth. As for us, we believe with Dr. Johnson that "he buys knowledge too dear who learns the use of the lacteals at the price of his own humanity," and that if, by the thousands of cruel vivisections now going on all over the world, we could obtain the very "elixir vitæ" itself, the gain would not be balanced by the injury which those cowardly cruelties are doing to the moral sentiments of our race—sentiments in the culture and development of which lies the true hope of humanity.

Strange to say, at the conclusion of his address Lord Justice Lindley turned round and told the young men who were looking to him for guidance, to remember that "brains were not everything; what was most wanted was character." But what "character," I ask in all seriousness, does he expect to be formed by the practice of spending the best years of a young man's life in fastening hapless creatures on vivisection tables, slowly dissecting out their nerves, running catheters into their hearts, or squirting deadly virus into their opened skulls? If this training does not tend to create the "character" of a cruel coward, I am at a loss to imagine any that would produce that result.—Yours, &c.,

FRANCES POWER COBBE.

Hengwrt, Dolgelly, October 4th, 1896.

THE PROPOSED PASTEUR INSTITUTE IN INDIA.

The following letters have been addressed to the Editors of Indian Newspapers:—

SIR,—News reaches London from time to time through the medium of your own and other journals, that the project of a

Pasteur Institute for India is being pressed forward, notwithstanding the many and serious objections there are to such an establishment. Not the least of these is the constant torture and sacrifice of animals that would be carried on there. Another is that whereas the object of all true sanitarians, anxious to secure the health of the people, has been and is to lessen the amount of disease producing material in the world, at such an Institute as that referred to disease germs would be actually increased and multiplied. Infection is carried by flies and other means, and hence such a place would be an absolute source of danger.

Another important point is that in regard to hydrophobia the treatment invented by Pasteur is no remedy, as the known mortality among patients after treatment has now reached the enormous total of 313 persons. The anti-toxin treatment of diphtheria is also still in its experimental stage, and according to Dr. Lennox Browne, of London; Dr. Joseph E. Winters, of New York; Drs. Gottstein and Soerensen, of Germany; Drs. Comby, Boissard, Bar, Gaulard, Dubrisay, Variot and Lutaud, of Paris, is absolutely dangerous to human life. The mortality from diphtheria both in London and Paris has been higher since the introduction of anti-toxin than ever before, so that clearly that substance is not a life-saving remedy. As Dr. Lutaud, the editor, wrote in a recent issue of the *Journal de Médecine de Paris*, "The anti-toxin serums will not survive close clinical examination and tests; in five years they will have lived their life."

At the Pasteur Institute in Paris there are practised the arts of multiplying disease germs and the manufacture of these anti-toxins of various kinds. The same thing will be done in India if the erection of this Institute be allowed. Let me, therefore, ere it be too late, call attention to the following solemn warning from the pen of Dr. Hubert Boëns, of Brussels:—

"The modern preventive inoculations have put back the science and art of medicine a century. If civilized people could be made to understand and practise true hygiene, where they are now careless and negligent, to learn that cleanliness, rather than the resort of antiseptics, is the scientific law, it would be easy to teach them that all organic pollution, such as viruses, anti-venins, matter, and morbid serums, can only engender in the healthy body similar affections to those from which they have been derived. And clinical science on its side, relying on the universal biological creed, upon physiology and upon pathology, would proclaim that it is impossible to cure the effects of a malady by the same means as have produced those effects. Pasteur sought to prevent and cure hydrophobia by a vaccine drawn from rabbits. M. Nocard seeks to prevent and curb tetanus with his serums! Nonsense! Sero-therapy is a decoy, a humbug, a senseless thing, which has claimed, and still claims, day by day, numberless victims, which has never cured by itself a single patient; and the enlightened intelligence of the nineteenth century ought to repudiate it as the maddest of human insanities, the wildest hallucination of scientific mysticism, which has too long led the medical profession far away from what should be its legitimate track."

I am, sir, your obedient servant,

BENJN. BRYAN,

Secretary Society for the Protection of
Animals from Vivisection,

20, Victoria Street, London, S.W., September 25th, 1896.

SIR,—Notwithstanding the numerous and serious objections which have been made against the establishment of a Pasteur Institute in India, certain interested persons are making the most strenuous efforts to found such a laboratory in that Empire. It needs but a little reflection on the great cruelty to animals inseparable from such an institution to understand the widespread indignation and sorrow which would be caused to the Indian people by the erection of a building which would of necessity become a veritable inferno of the animals. Mercy to animals has not to be taught in India as it is in Europe. It is part of the religion and nature of the people; not exotic as it often is in the Western world, and for this reason it is the more incumbent on the Government of India to take care not to offend the susceptibilities of the

people by establishing and maintaining a great temple of torture in their midst. Although bacteriological studies may be interesting to investigators of the lower forms of life, the attempt to construct a science of medicine on a bacteriological foundation has proved a conspicuous failure in the past, and is doubtless doomed to disappointment in the future. The whole system of protective inoculations by which the blood of the patient is poisoned with diseased material from the bodies of animals is neither more nor less than a reversion to the filthy practices of the middle ages. There are loathsome medical customs in use by savages which have more to be said for them than can be said for the vaccines and serums of the bacteriological laboratory. The principle underlying the system of preventive inoculations is singularly akin to the Hindu belief in the smallpox Goddess Mata. The people do not ask the divinity to protect them from the disease altogether, they only pray for a mild visitation. So our bacteriologists propose to inoculate us with the serums and viruses of diphtheria, cholera, the infectious fevers, and rabies, in order that we may be proof against the diseases from which the disgusting remedies are elaborated. We have tried Koch's consumption cure, with what result all the world knows only too well. Diphtheria anti-toxin has been tried and found wanting, as the death-rate from the malady both in London and Paris has increased since the introduction of the inoculations. Pasteur's inoculations against hydrophobia are worse than the grossest quackery, for they at least are answerable for the deaths of many deluded victims of a visit to Paris. The cholera-inoculations are on their trial in India, and if in certain cases they seem to have afforded some protection, there is good reason to fear that it is only of a very fugitive character. In a recent visit to the Pasteur Institute of Paris I saw countless animals in the menagerie, either the victims of cruel operations, or awaiting their turn to be inoculated with painful diseases. It cannot be proved that one single human life has been saved by this system. Will the people of India tolerate its establishment in their midst?

I am, Sir, yours obediently,

EDWARD BERDOE, M.R.C.S. (Eng.), L.R.C.P. (Ed.).
London, October 9th, 1896.

THE PASTEUR TREATMENT AND HYDROPHOBIA.

(FROM THE "PALL MALL GAZETTE," OCTOBER 5TH.)

SIR,—If I were to argue, as Mr. Cooper suggests, that hydrophobia or rabies in the human being does not exist, I should not be without good authority to support my contention. It has been my painful duty on two occasions, to witness deaths from hydrophobia in the wards of a famous hospital, and I well remember hearing the physicians debate among themselves whether there was such a disease or not. Some contended that the case was hystero-epilepsy, a purely nervous disorder, which, however, all the skill of all the physicians failed in any degree to alleviate; and we watched the miserable patients die from a sky-light in the padded room. It was a bitter satire on the medical science of the day; this was twenty years ago, and I honestly believe we are as helpless but much more academic in our discussions on the matter at the present moment. The *Medical Annual* for 1895, summarizing the latest treatment of the disease, says:—"Diller, in an exceedingly interesting report upon this disease, in which he gives statistics in regard to seventy-eight cases, is of opinion that many of the so-called cases are 'utterly incredible and wholly spurious.' He deplors the popular agitation which has attended the establishment of so-called 'Pasteur Institutes' which have undoubtedly led to the increase of hystero-epilepsy, both in this country and in France, and lays little reliance upon the statistics of the ardent supporters of the founder of the inoculation cure and his followers."

I have before me the names and addresses of 313 patients who up to the present date have died of hydrophobia after having submitted to the treatment of M. Pasteur. The editor of the *Veterinary Record* recently said that "the death of a rabbit with cerebral symptoms is not a positive indication of death from rabies," and an eminent veterinary surgeon says, "It is impossible to diagnose rabies by simple post-mortem examination." (May 2nd and 19th, 1896.) This failure of

inoculation tests and post-mortem examination to satisfy experts by no means proves, as Mr. Cooper implies, that rabies is non-existent; it only serves to prove that our knowledge at present does not warrant us in dogmatizing on the subject as the Pasteurian school endeavours to do. It is illogical to argue that "if science can find no means of proving the existence of rabies, rabies has no existence;" for my own part I believe in the existence of true rabies, but I believe also in spurious rabies, and I know that the false is often mistaken for the true disease. I have a number of certificates and statements from medical men in India and elsewhere who claim to have cured patients of hydrophobia by profuse diaphoresis, or what is popularly known as the Buisson system of vapour baths. Although I have hitherto been sceptical as to the value of this treatment, I candidly admit that the evidence is too strong for me, and, as it is perfectly harmless and easy of immediate application, it is certainly the duty of any doctor who is called to a case of hydrophobia to submit his patient to the Buisson system, which can be carried out free of all cost by application to Captain Pirkis, R.N., the High Elms, Nutfield, Surrey, who will wire particulars at once.—I am, Sir, yours, &c.,

EDWARD BERDOE, M.R.C.S.,

London, E., September 30th.

"THE LICENSED TORTURE OF ANIMALS."

(FROM "THE ECHO," LONDON, OCTOBER 10TH.)

SIR,—I am interested in the question raised by Mr. Joseph Collinson in your columns of October 6th, for, no doubt, the difficulty of "restricting" vivisection is very great, and any of your readers who may be anxious to attempt the task of adjusting the claims of obedience to the principle of mercy to animals, while at the same time allowing the vivisector to continue his practices, would do well to sit down and put their "adjustment" into black and white so that all may see it.

There is not one experiment now being performed in any of the laboratories throughout England that has not been many hundreds of times performed and the results carefully tabulated, and the results again equally carefully disputed; and thus "research" goes on in one eternal circle of torture and confusion, and Mr. Collinson does well in pointing out that the agitation against cruelty can never cease, except with its absolute prohibition.

During the last General Election I was asked to make one of a deputation to wait upon Mr. Courtenay Warner, the present Member for Lichfield, who was then contesting the Division of North Somerset. Mr. Courtenay Warner expressed great sympathy with the views of the anti-vivisection deputation, saying he was most desirous of helping to protect animals from torture, that he could not promise to support any Bill in Parliament for the absolute prohibition of vivisection, but would freely promise to support any proposal for its stringent restriction. In answer to a question of mine as to what constituted restriction, Mr. Warner said he thought the law might allow 100 or 150 experiments every other year, and he thought three, four, or five thousand experiments altogether too many. The licensed vivisectors of England would, no doubt, laugh to scorn Mr. Warner's humanitarian suggestion, and any attempt to merely "restrict" the practice is quite unsatisfactory; in the language of the late Lord Coleridge, "if the use of a thing cannot be kept free from its abuse, then the use itself must be forbidden."

I was highly amused a few days ago, at an anti-vivisection meeting held at Leeds, to hear a physiological student, who was criticising the lecturer, say that he agreed with the demand made by the speaker for mercy to be shown to the animals "everywhere," except in so far as it applied to physiological research. This student confessed to occasionally addressing mercy meetings; he, indeed, like many others, "strained at the gnat and swallowed the camel." Is not the more logical position either that of allowing unrestricted vivisection or its entire prohibition by law as a mean offence against the highest dictates of humanity and justice? Yours truly,

T. A. WILLIAMS (of Bristol).

Hull, October 7th.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, NOVEMBER 2nd, 1896.

"CLINCHERS" AGAIN.

THE re-opening of the medical schools afforded that well-known vivisector, Professor MICHAEL FOSTER, the opportunity — when delivering "the First Huxley Lecture" at Charing Cross Hospital—of illustrating the value of experiments on living animals, by referring to certain discoveries made by the physiologists in the early part of HUXLEY'S career. The lecturer first instanced the discovery made by the brothers WEBER in 1845, in which they showed that electrical stimulation of the vagus nerve stopped the heart in diastole, or, as we say, inhibited it.

We briefly referred to this discovery in our "Clinchers Unclinched" last month, and we only notice it again because it is evident that Professor FOSTER thinks a great deal of this proof of the value of physiological experiment. He wrote the article, "Physiology," in the last edition of the *Encyclopædia Britannica*, and in defending the practice of vivisection, he points with triumph to this "inhibition" discovery as in itself a complete answer to the question, "What has Vivisection done for practical medicine?" But the Professor does not tell his readers—nor according to the press reports of his lecture did he tell his hearers—that the experiments on the nerves of the heart have for the most part been carried out on the frog, and that a pithed frog—that is to say, a dead one; for it is well known that this animal's heart continues to beat for a very long time after death even after its removal from the body. "SCHIFF," say LANDOIS and STIRLING, "found that stimulation of the vagus of the frog caused acceleration of the heart-beat when he displaced the blood of the heart with saline solution. If blood-serum be supplied to the heart the vagus regains its inhibitory action" (p. 669). A dead frog was obviously employed in these investigations, and as anti-vivisectionists do not object to experiments on dead animals, we do not think we are called upon to answer this objection further.

Professor FOSTER next alluded to the discovery made by CLAUDE BERNARD in 1851, when he showed that division of the sympathetic nerve in the neck led to fulness of the blood-vessels in the head and face. It is

curious that this illustration with the subsequent reference to the vaso-motor nerves (or those which control the calibre of the arteries) forms another of the "clinchers" replied to in our former article. It would almost suggest that the learned professor with whom we are now dealing was in some way responsible for the "Clinchers." As already explained, the physiology of the vaso-motor nerves has largely been studied on the pithed frog, and the experiment on the fulness of the blood-vessels of the head and face can be beautifully and harmlessly shown in the human subject by the inhalation of a drop of nitrite of amyl, which temporarily paralyses the vaso-motor nerves of the face, and thus increases the quantity of blood in the arteries. Much has been done by vivisection which could have been done better without.

The next illustration was connected with diabetes, and BERNARD'S discovery in 1850 of glycogen in the liver. BERNARD showed that if a certain portion of the brain is injured we get sugar in the urine, and so it is declared that he learned that diabetes is not a kidney but a brain disease. Mr. ERICHSEN, as spokesman of the Commissioners, made the most of this at the Royal Commission. It is untrue, however, to say that before BERNARD'S experiments were performed the kidneys alone were blamed for diabetic disease. For two hundred years past physicians have suspected that the liver, the bile, and digestive functions were involved in the disturbance of the animal economy, resulting in diabetes. BERNARD himself proved his theory that the sugar is produced in the liver, by examining that organ in recently dead human subjects. But BERNARD was a vivisector and preferred the physiological laboratory to the *post mortem* room and abattoir. BRUNTON, PAVY, FERRIER, and SCHIFF followed in his line of research, and they discovered that many other injuries, besides that of the floor of the fourth ventricle of the brain, would cause diabetes. When the pancreas (or sweet-bread) is removed from dogs, diabetes is produced. Division and stimulation of the central end of the sciatic nerve will cause it, and so will stimulation of the vagus nerve. It may occur also after nervous excitement and shock, concussion of the brain, and after certain injuries to the skull and spinal column. Poisons will cause it, and so will some infectious diseases. What is all this but to say that violent disturbances of the exquisitely delicate chemical processes of the animal economy will upset the work of the living laboratory? Dr. CULLEN taught us this a hundred years ago, and so, long before BERNARD began his cruel experiments on animals, the medical profession was well aware that diabetes is due to a disturbance of animal chemistry. The treatment of diabetes is even now very confused and unsuccessful, and it is certain that it has not been improved by any experiments on animals, whatever theoretical information they may have given us.

Professor FOSTER next instances the observations of WALLER, in 1850-2, on the dependence of the nutrition

and function of a nerve fibre on its continuity with the body of the nerve cell from which it proceeds. From these observations arose what physiologists call the "Wallerian Law of Degeneration," and Dr. FOSTER remarked that "perhaps they did not yet realise to the full all that this observation taught." Perhaps not; but it has long been known in surgical practice that when nerves are divided in accidents they can be restored to their perfect functions by stitching the two ends together, even after a lapse of sixteen months and more. PAUL BERT's experiment of stitching the tail of a rat to the middle of the creature's back, and after union had taken place cutting the broad end from its natural position and then causing pain by irritating the cut end, was simply a bit of physiological curiosity, and had no practical result.

After the above "clinchers" were duly hammered in the Professor gave us a morsel of information on the working of the Act. We have become used to the jeremiads of English experimenters who declare that our action is ruining medical science in England, but Professor FOSTER declared that "in regard to her opportunities England was now equal in this matter to other nations," and that this recovery was due "to the whip of the anti-vivisectionists." Of two things one; our opponents cannot have both. We are either hindering or helping the advance of science, and are to be praised or blamed. Which is it?

THE INTRODUCTORY MEDICAL ADDRESSES.

THE first of October is the New Year's Day of the medical schools; and it is a time-honoured custom with the majority of them to commence their proceedings with a note of welcome to students old and new in the form of an introductory address. The addresses delivered during the past month present the usual variety of topics and in the main serve more as a revelation of their authors' minds and an illustration of general medical sentiment than any useful purpose, so far as the student is concerned. The glories of vivisection were held up to the admiration and emulation of budding medicals by a number of speakers. Mr. VICTOR HORSLEY, who was selected to deliver the opening address at the Yorkshire College, at Leeds, dwelt on the importance of chemistry in medicine, and stated that "nowadays it is no longer sufficient to say that a person has this or that form of dyspepsia, you ought to be able to say and to prove by chemical analysis what is the particular form of defect in the chemical process of digestion and what species of chemical fermentation or change is going on in the alimentary canal." And he went on to say that at University College, London, Dr. VAUGHAN HARLEY had been recently appointed Professor of Chemical Pathology. Dr. VAUGHAN HARLEY is one of the keenest of British vivisectionists, as our readers know, and we shall have to keep an extra sharp eye on his doings. We have no doubt he will rejoice Mr. HORSLEY's

heart by numberless experiments on the alimentary canals of animals, but we very much question whether he will lessen in the smallest degree the sufferings of human beings from dyspepsia.

At University College Dr. SIDNEY MARTIN, who occupies the chair of Pathology in the college, discoursed on "Progress in Medicine," and devoted much of his time to the praise of experimenting on living animals. One of his arguments strikes us as novel:—

"In medicine [experiment] is of the highest importance, not only in the investigation of the scientific branches of our subject, but actually in the treatment of disease. In not a few cases the treatment of disease is an experiment, one intended to benefit the patient, it is true, but still an experiment, since all the conditions present in the body when we give a drug or apply a treatment are not known, and we watch the result to obtain new facts, which may be favourable or unfavourable. The method of experimentation is one, therefore, worthy of being included in the training of the medical practitioner."

In other words, because medical science is in such a backward state that a great deal of it is experimental, and by merely groping in the dark, therefore students should be trained for the groping business by being taught to experiment on animals. The professorial experimenter exhibits in himself the effects of this method, in that he cannot see the essential difference between trying to benefit patients and trying experiments on animals which can only do them harm. He instanced as one of the fruits of vivisection the discovery of the function of the thyroid gland and of the treatment which has been the outcome of it. As our readers know, all the facts of the case were worked out from the clinical standpoint, experiment being purely a work of super-erogation. It reminds us of an inquest we saw recorded not very long ago. A child had been poisoned by eating the ripe berries of belladonna. The child presented all the characteristic symptoms of belladonna poisoning before death ensued, and after death belladonna berries were found in the stomach. There was not the shadow of a doubt in the case; but the doctor who had charge of the evidence made a profound impression on the jury by informing them that he had applied an extract of the stomach-contents to the eye of a cat and that this had dilated the pupil!

Bacteriology is the great hope of pathologists now-a-days, and on this subject Dr. SIDNEY MARTIN had a good deal to say. In the dictionary of the germ theorist there is no such word as "fail." For him the discovery of a bacillus is just as good as the eradication of the disease. And if scoffers point out that whilst many microbes have been discovered no disease has as yet been exterminated, that does not disconcert him in the least. Passing from the mention of the consumption bacillus (reference to which would seem to call for a little modesty of language), Dr. MARTIN cheerfully remarks: "The cause of other infectious diseases has been discovered by bacteriological research, *constituting the first step towards their eradication.*" Here is the secret of all the jubilation, no disease has been eradicated, but

then, "*the first step has been taken*" in that desired direction. However, Dr. MARTIN is sometimes able to take a dispassionate view of his craft, and we will conclude our account of his address by quoting a passage which has our entire approval. It accurately describes the vast bulk of the product of vivisection laboratories all the world over :—

"Human nature is, however, very fallible, and the human mind really very limited. The investigator is not infrequently uncertain of his facts on which the theoriser builds his castle of straw, and only too commonly he is blinded by some preconceived idea which endangers the accuracy of his work. *A cynic, I believe, has remarked that the duration of a physiological fact is four years, or some such period.* Although this is not a strictly accurate statement, it serves as a warning of the danger of hasty conclusions."

Dr. MARTIN is quite right. Four years is not an accurate estimate of the life of laboratory "facts," they perish in a much shorter space of time.

At St. Thomas's Hospital the authorities are fond of going outside the medical profession for their inaugural lecturers. Last year it was Sir EDWIN ARNOLD who hoped the doctors wouldn't vivisection more than was absolutely necessary, and implored them not to hurt the animals much when they were compelled to outrage their own feelings for the good of humanity, by engaging in the practice. After the poet, a judge, LORD JUSTICE LINDLEY, was this year chosen as the orator. He remarked that he had been on the Bench for many years, and had been trying to hold his tongue, and that it was quite a new experience for him to speak before an audience to ladies and gentlemen. His Lordship is, no doubt, very learned in the law, which accounts for his reticence. About medicine he is anything but learned, hence his volubility. Here, for instance, are his remarks about vivisection, which, if they are correctly reported (*Standard*, October 3rd), reveal a state of mental confusion remarkable in a clear-headed lawyer :—

"He would like to say a word or two about vivisection. Those who desired it, and, above all, those who would repeal the laws relating to it, were taking upon themselves a fearful responsibility. Public opinion was divided on the question, and there was a good deal to be said on both sides, but to him it was a matter of weighing human life against animal life, and judgment would always be in favour of the human being (applause)."

The most humane, most interesting, and most useful of the addresses was that delivered by Sir HENRY LITTLEJOHN, of Edinburgh, at the opening of the Sheffield Medical School. In the course of it he mentioned, incidentally, a service which can be rendered by the animal world to the practice of human medicine. That service is not rendered in the torture trough of the experimenter, but by affording in their own bodies material not for vivisection, but for kindly treatment. We will conclude this article by quoting from his address a passage which shall be our answer to all the advocates of animal torture, be they lords justices, poets, or professors. The superior opportunities for clinical teaching afforded by a provincial hospital, according to Sir HENRY LITTLEJOHN's ideas, more than outweigh

the facilities for experimenting which abound in metropolitan institutions :—

"Now this is a great advantage which provincial schools enjoy, and too much cannot be made of it. Without thorough clinical training, no student should be allowed to enter on practice. . . . One of our most celebrated specialists in diseases of the heart holds a veterinary diploma, and when I asked him 'why he had taken the trouble to go through a laborious training in another department of the healing art,' his answer was: 'In dealing with the diseases, say of the horse or cow, you have to exercise your skill in estimating aright the symptoms presented by the animal. You cannot assist yourself by interrogating it, so as to ascertain the seat of pain, or negatively determine the seat of the disorders by the absence of some crucial symptom.' And he assured me that, *as a physician, he had almost daily felt the benefit of his practice among the lower animals.*

Yes, that is it, kindly practice—not heartless experiment—is the great instructor in the Healing Art.

"WHAT IS LISTERISM!"

(FROM "THE MEDICAL PRESS AND CIRCULAR," SEPT. 30TH.)

SIR,—In answer to my query "what is Listerism?" you courteously reply in your impression of the 26th ult :—"Sir Joseph Lister was the first to teach and prove by his practice the value of the principle of surgical cleanliness." Will you allow me, with all respect, to emphasize that Sir Joseph Lister was not "the first" to do anything of the kind, and that the "principle of surgical cleanliness" is not "Listerism"? "Listerism" some 25 years ago presupposed that suppuration was due to germs, and that suppuration in wounds could be prevented by killing or excluding these germs. Every one with the most fragmentary knowledge of natural history knows that to perform such operations under these circumstances, it would be necessary to perform them *in vacuo*! Lister began with carbolic acid to kill his innocent spores, and by ridiculous *mouvements de manège*, followed by superficial members of the profession, he trod the bars of bichloride of mercury, cyanide of potassium, "putties," gauzes, steam-engines, and heaven only knows what not; and, like the mutilated rabbit, he at length arrived where he began, at carbolic acid, *minus his spores and his theory*, for he has for some time abandoned the attempt to kill surrounding germs, to prevent suppuration, by carbolic acid or any other germicide. Lister, with his surgical investigations, obtained results inferior to obscure and *unscientific men*, who laughed at them and his germs; see, for example, the recent obituary notice of Dr. John Borland, of Kilmarnock, in the *Lancet*. If you contend that the application of antiseptics or deodorants to wounds is "Listerism," then I deny it. When I was a student, some thirty years ago, we applied permanganate of potash, chloride of zinc, chlorate of potash solution, charcoal, &c., to wounds, and these, as I pointed out in my brochure "On Therapeutics and Diseases" nearly thirty years ago, acted in Nature's way of deodorating as oxidising agents. Antiseptics, as I pointed out in "Kochspiel," are totally different agents; they are agents which coagulate the albuminous principles of living tissues. But, further, yeast poultices were applied as deodorising applications—poultices of "germs" which Lister was so anxious to exclude from wounds and to kill—and they did good, and will do good still as oxidising agencies, reducing fœtid complex intermediate compounds to innocuous binary ones acting as occurs in nature. Yeast transforms sugar into alcohol by a process of oxidation, and it acts in a precisely similar manner on wounds and fœtid surfaces generally. "Listerism" is dead as Queen Anne, and not one day too soon. It was a fad from the commencement followed by the obsequious crowd, who pose as scientists *au courant* with the age. It has gone the way of many another fad in medicine and surgery. It and its congener, the germ theory, on which it was based, have done an immense amount of mischief to medical science, causing a diversion from the only true basis of medical and surgical science, viz., physiological

chemistry and anatomy, and bringing undeserved ridicule and contempt on the fractional part of *real science* to which modern medicine could justly pretend.

I am, Sir, yours, &c.,
D. CAMPBELL BLACK, M.D., F.R.S.Ed.,
Professor of Physiology in Anderson's Coll. Med. School.
Glasgow, Sept. 18th, 1896.

[To the above, the Editor of the *Press* appended this remark:—"Although we publish the foregoing letter as a reply, we must not be understood to endorse any of the statements therein contained." We should think not, indeed! Such bold statements of the truth are far from being generally acceptable even to those who pose, as does the *Press*, as "independent" medical journalists.—Ed. Z.]

DR. GRANVILLE BANTOCK'S OPINION.

(FROM "THE MEDICAL PRESS AND CIRCULAR," OCT. 7TH.)

SIR,—I shall be much obliged if you will allow me space for a few remarks on the question "What is Listerism?" Time was when it was easy to answer this question, when the doctrine and practice were well-defined and could be stated in a few words, and when the following would have been taken as a succinct and fair description:—Listerism was founded on the idea—for that it was only an idea subsequent events have conclusively proved—that ordinary atmospheric air contained so-called germs, that these germs falling into a wound or diseased area there developed into their respective bacteria, and that these bacteria produced all the results which characterized unhealthy processes, while the practice, founded, as a distinguished writer in the *Times* said, upon a "hypothesis which had not been proved, and probably was not true," was to cover the field of operation with a cloud of spray impregnated with carbolic acid, and to employ a solution of the same substance for the purpose of destroying the germs that lurked in the sponges, on instruments, and on the hand of the operator, together with a mode of dressing which should subsequently exclude them from the wound.

Since then both doctrine and practice have undergone a series of almost kaleidoscopic changes, so that at the present day the question is a very difficult one to answer. These changes vary from a thorough belief in the injurious effects of atmospheric germs to a total disregard of them—as proved by Sir Joseph Lister's admission that "the germs in the atmosphere may be *totally disregarded*" (Berlin address); from a belief in the efficacy of the carbolic spray in destroying these germs to a confession of shame that the spray had ever been invented for the purpose for which it was used, and a demonstration of the impossibility of its producing the effect it was supposed to have (same); from a conviction as to the special properties of carbolic acid to its complete rejection on account of its irritating effects, and the substitution of a poisonous substance (corrosive sublimate) or an absolutely insoluble and, therefore, inert substance (a double cyanide), and then to a final return to carbolic acid in "virtue of its powerful affinity"—a mere assumption—"for the epidermis and oily matters associated with it, and also its great penetrating power," and as being "still the best agent at our disposal for purifying the skin around the wound." Can it, therefore, any longer be maintained that Listerism is a definite dogma and practice?

Your correspondent "A Research Scholar," in his laboured reply to Dr. Campbell Black's unanswerable arguments in his letter to the *Glasgow Herald*, exhibits an amazing confusion of ideas when he maintains that "Listerism," as he understands it, "implies the necessity of avoiding contamination of open wounds by organized fermentative agents, the method used in carrying out this injunction is immaterial," and then adds, "Neither the spray nor the simple application of carbolic acid constitutes Listerism; they are simply methods of applying the principle of which Dr. Black's 'absolute cleanliness' is only another form." If the use of a solution of carbolic acid in the form of spray and otherwise did not constitute Listerism, then the term "Listerism" was meaningless. I cannot refrain from saying that "A Research Scholar" appears to me to have made a very poor use of his opportunities. If "A

Research Scholar" will only search back through the literature of this subject of some twenty years ago, he may yet be able to justify his title to the honour he appears to have won. I would recommend him to study this subject at the bedside, as I have done, not in "beakers of broth," and not to draw, from observations on dead animal or vegetable matter, conclusions applicable to living tissues. Listerism was then a definite doctrine and practice, which it is not to-day. Not only has the spray finally disappeared from the operation room, but it may be affirmed that, on the continents of Europe and America, where the doctrine was accepted with marked enthusiasm, there is scarcely to be found an operator of any note who uses any antiseptic substance as applied by Lister. Operations are now conducted on what is called the *aseptic* system—a term that implies as much confusion of thought as that exhibited by "A Research Scholar." It is quite correct to speak of performing an *antiseptic* operation, but it is utter nonsense for a man to say that he has performed an *aseptic* operation, for he has to await the result to know whether the operation has been done *aseptically* or otherwise. No one has ever seen a germ, and if he believe in germs he has no means of proving their presence or absence.

Driven from pillar to post, bewildered with the multiplicity of changes, and staggered by the results obtained under a system in which all so-called antiseptic substances are "conspicuous by their absence," the advocates of Listerism now claim the doctrine of "cleanliness" as their own, forgetting that there was a time when Lister affirmed that he did not even aim at "surgical cleanliness," so confident was he as to the virtues of carbolic acid. But, as Dr. Campbell Black well says, "Cleanliness is *not* Listerism." It is, in fact, the very opposite, for it aims at avoiding the access to the wound of any irritating substance. So intent was Sir Joseph Lister on maintaining his guiding principle that, in his Berlin Address, he claimed me as an "Antiseptic Surgeon" because I used sulphurous acid to clean my sponges *after* the operation, although he must have known that all trace of it was got rid of *before* it.

As akin to this subject, I may, perhaps, be allowed to remark further that the recent observations of Dr. Geo. Stoker, accidentally resulting from his marvellously successful treatment of chronic ulcers, etc., by means of oxygen gas, demonstrate conclusively that, as I have long maintained, the various forms of bacterium, now called bacteria, *are the result and not the cause of disease*, tending, therefore, to show that the whole modern doctrine of bacteriology is a gigantic mistake, and sadly in need of revision.

I am, Sir, yours, etc.,

GEO. GRANVILLE BANTOCK.

12, Granville Place, Portman Square,
Oct. 1st, 1896.

THE CREED OF THE VIVISECTOR.

We learn from the *Anwalt der Thiere* that Herr S. Groshaus quoted the following at the Buda Pesth Congress. It appeared in the last report of the Dutch Anti-Vivisection Society, but was originally published by the author, Professor P. Harting, of Utrecht, so far back as 1874:—

"1. The Creator of the world, who is quite a different being to Him whom the Christians worship, has introduced cruelty into the order of the universe. It is a law of nature, to which man is also subject, and by which the vivisector is justified in performing cruel experiments. Indeed it is his duty to do so, otherwise man would not be able to carry on successfully the struggle for existence.

"2. Animals have no rights.

"3. In vivisection it is impossible to draw a line between what may and what may not be allowed.

"4. Compassion is not a virtue but simply arises like the instinct of animals, from the material part of man's nature.

"5. Agreement is attained in questions of natural science, but not in matters of custom.

"6. Vivisectors are supreme in their own sphere. The State must not set any limit to their freedom, or laymen interfere with them, as they are humane men who owe responsibility to no one but themselves."

To this creed might be added the following catechism:—

"1. (a) How did compassion find a place in the order of the universe? (b) If a man has no compassion, but on the contrary considers it his duty to be cruel, is it probable that he can be at all anxious for the survival of any one save himself?

"2. Has a man any rights?

"3. Why draw a line *between* the different kinds of vivisection?

"4. Is cruelty a virtue as well as a duty, or does it simply arise from the brutal part of man's nature?

"5. Do doctors disagree on matters of custom only?

"6. Is it sufficient for a man to say he is humane in order to obtain full liberty to be cruel?"

NEW BOOKS, REPORTS, &c.

We have received from Mr. Constant Stams, of Rotterdam, an English translation, done by himself, of a considerable portion of his pamphlet written and published in the Dutch language, "*On the Aim and Essence of Vivisection.*" We could have wished that space had allowed of our reproducing much of this work by Mr. Stams, so freely undertaken and so conscientiously carried out, but may say that he has taken up the claims of Pasteur and most cogently contested them point by point, as well in regard to anthrax as in reference to hydrophobia. He has also collated with much care the statistics of hydrophobia mortality in various countries, with the result of showing how small, as a rule, that mortality is. He also quotes the advice of M. Menu to a lady at Edinburgh, given on M. Pasteur's behalf, to the effect that a suspected dog should not be killed but shut up and observed, so that it may be settled for a certainty whether the animal is mad or not. This is excellent advice, which, were it generally followed, would free many minds from the worst of fears. The following passage, bearing on the general results of the Pasteurian system, is well worth quoting. Mr. Stams writes:—

"The statistics of Pasteur might have had some value if they could rightly have stated that in Germany—where no notice was taken of his inoculations and from whence people did not travel to Paris in order to get themselves injected with filthy matter—the official statistics since the inoculations were commenced elsewhere showed that the death-rate by hydrophobia had risen, or had remained the same; whilst on the contrary, according to official reports, it had fallen in France and other countries after Pasteur appeared on the stage. But this was not the case. . . . The death-rate from hydrophobia, already insignificant, not having, in fact, been modified by the treatment of Pasteur."

Koch and Ferran (the Spaniard) are dealt with in regard to their alleged discoveries on cholera; and Loeffler and others in regard to diphtheria; and Mr. Stams makes good the positions he takes up in regard to them. From the copious extracts we have seen of the work of Mr. Stams we have no hesitation in anticipating great good to arise among those who peruse it in his own country and native tongue.

Die Vivisektion, Von Prof. Dr. Paul Förster.—We are glad to see that Dr. Förster's epoch-making address delivered at the Buda-Pesth Congress, has already reached a second edition. The author first passes in review those who directly or indirectly support vivisection. He believes it useless to appeal to the professional vivisectioners who glory in their work, and who look upon the slightest sympathy with the victim as highly discreditable to the operator. He has but little hope also of converting those who, though not practising vivisection themselves, have allowed their feelings to become blunted by frequent contact with it; or those who have permitted professional etiquette or social considerations to silence their consciences. He looks rather to the great mass of people possessed for the most part of sound minds in sound bodies, to lend a favorable ear to his appeal. At Zurich, it is true, a majority of the people allowed themselves to be misled by those in authority, but there is every reason to believe that in the near future right will triumph there. Dr. Förster apologises for giving details of the horrors of vivisection, but considers it necessary to do so, not only in order to awaken the consciences of the indifferent, but also to counteract the plausible misrepresentations of the vivisectioners who would have the world believe that their humanity is above suspicion, and that little or no

pain is inflicted on their victims. He skilfully attacks each position taken up by our opponents with regard to the value of the work done by means of vivisection, and proves it to be untenable. Finally, he treats the question from the moral point of view, and insists that whatever our burdens may be, and he believes they are mostly of our own making, we have no right to try and shift them on to poor weak inoffensive creatures. In an appendix the author replies to various criticisms, and at the same time complains of the very imperfect way in which his address was reported in the ordinary journals. This is an old complaint, but is a matter of great importance, as by such means a speaker will reach effectively a much larger public than that assembled to hear him. Fortunately in Dr. Förster's case the public is able, and has already largely availed itself of the opportunity, to obtain a full report. We wish the little work every success, and have no doubt but that it will pass through many editions.

RECEIVED.—*The Homeopathic World*, London; *The Harbinger*, Lahore, India; *The Queen*, Calcutta; *Anti-Vivisection*, Aurora, Illinois; *Vegetarian Messenger*, Manchester; *The Herald of Health*, London; *So-called Sport*, No. 20 of the Humanitarian League's publications; *Humanity* (October), *ibid*; *What it costs to be Vaccinated*, by Joseph Collinson, *ibid*; *Our Animal Friends*, New York; *The New England Anti-Vivisection Quarterly*, No. 4; *Het land aan gene zijde van de zon* (C. van der Hucht), Kerkhoven; *Pasteur, en zijne inenting*, *ibid*.

HOME INTELLIGENCE.

LEEDS.

MR. T. A. WILLIAMS'S TOUR.

In the Friends' Adult School, Great Wilson Street, Leeds, Mr. T. A. Williams, of Bristol, representing the Victoria Street and International Society, delivered a lecture on Tuesday evening, September 29th, under the auspices of the Society. His subject was "Vivisection of Animals: Cruel and Useless, and Dangerous to Hospital Patients." Mr. Joseph Latchmore presided.

The LECTURER said that whilst the practice of vivisection was nothing near so prevalent in England as it was on the Continent, still in our own country something like three or four thousand experiments were made yearly, and the net gain to humanity for all the useless suffering which these entailed on the dumb subjects was practically *nil*. He suggested that some Member of Parliament should ask the Home Secretary to call upon the vivisectioners to state the results of their experiments made under Government licenses. In conclusion, he claimed that science should obey the law of mercy, and put an end to the practice of vivisection. Mr. Williams, whose address lasted for an hour, was heartily applauded.

The CHAIRMAN then invited questions to the Lecturer, and among the questioners was Mr. CROSSFIELD, a student of physiology, and he claimed that Harvey discovered the circulation of the blood. The use of choleraform, the localization of function, the better treatment of fever, were also, he said, all the results of Vivisection.—The Lecturer replied with great care to each of these points, and his replies were received with keen appreciation by those present, the Chairman remarking that he thought the replies to the questions exceedingly clear. He begged to ask the questioners whether they were satisfied?

Mr. CROSSFIELD said he was surprised that such replies could be given. He did not think such a defence of the anti-vivisection position could be made. Still he felt that while wishing to be merciful to animals, yet, in research mercy could not be shown, it was in the way of the investigator.

Mr. WILLIAMS rejoined that a man who was investigating for discovery without mercy in his heart, was simply searching as in a darkened room. Truth would not come to him under such conditions.

The Rev. JOHN BELL, who paid the Lecturer a compliment for his address, moved the following resolution, heartily committing himself to its terms:—"That this meeting is of opinion that the practice of experimentation upon living animals, known as Vivisection, is of necessity cruel and immoral, and moreover, high medical authority being divided as to the value of the practice to the healing art, pledges itself to agitate for its prohibition by Act of Parliament."

Mr. ARTHUR GASCOYNE seconded, and on its being put to the meeting it was carried unanimously, Mr. Crossfield not voting.

Thanks were given to the Chairman and Lecturer.

HULL.

On Sunday evening, October 4th, at the Hull Psychological Society, Mr. T. A. Williams delivered an address on "Vivisection." Mr. Thompson presided, and conducted the devotional portion of the meeting.

Mr. T. A. WILLIAMS said vivisection of animals involved much suffering, and in the experiments which were increasing year by year in England animals were being subjected to the most atrocious torture. Large numbers of men and women were of opinion that this practice, which had existed for many centuries, during which millions of animals had been put to much suffering, was a disgrace to our professions of humanity. The vivisector could no more save from the consequence of disobeying the laws of life, by his tortures upon animals, than the inquisitor in the dark days of the past could save men's souls by torture of their bodies. It was a wrong method of interrogating Nature, and the truth could not be derived by such means.

Mr. NEEDLER, in a short speech, congratulated the lecturer upon his able and eloquent treatment of the subject.

Mr. PETER MILLAR and the CHAIRMAN also spoke.

In the course of the discussion, it was suggested that a Society should be formed locally to assist the movement, and Mr. Williams received an invitation to again occupy the platform upon another occasion.

SHREWSBURY.

THE CHURCH ANTI-VIVISECTION LEAGUE.

This League, as is the rule, held its annual meeting during Church Congress week at Shrewsbury on Tuesday evening, October 16th. The chair was taken by the Rev. F. Roberts, of St. Giles's, Shrewsbury. He explained that the object of the League was to protest against vivisection. God, Who is the Author and Creator of all, could never sanction this method of advancing science. How any Christian could be found to defend the practice he could not understand.

The Rev. ALEXANDER SMITH, of Rodington, Shrewsbury, followed, and said: Vivisection claimed that the sufferings of animals were necessary in the interests of human beings. But many of the best and cleverest of medical men denied this. Lawson Tait, the celebrated Birmingham surgeon, maintained that not only had no advance been made through this practice but that knowledge gained from experiments on living animals was so misleading and mischievous as to be a positive danger to the human subject, and he had therefore entirely renounced the practice. Nothing could justify cruelty. A day would come when it would be universally condemned, and vivisection would be entirely abolished.

The Rev. J. C. GAWTHERN, of Bray, Berks, gave an account of the lasting impression made on his mind as a lad at a large hospital where, after watching the skill and kindness of the doctors in attending to the patients, he was taken to the house of the head physician and shown downstairs in a miserable den, cages full of wretched cats and dogs waiting to be taken out for vivisectional experimentation. Never could he forget the contrast between the peace and comfort and luxury upstairs of the inmates of the house and the agony of these helpless victims below. He ought to add, in excuse for this physician, that he was an avowed atheist. There was no difficulty in obtaining a license for vivisection; he knew of a surgical instrument maker who was given a license to practice vivisection at his will.

The Hon. Secretary then read the report announcing that 125 new members had joined the League.

SITTINGBOURNE.

In connection with the Mercy Department of the British Women's Temperance Association, Miss E. F. Evans (of Bristol) gave an address, about the middle of October, at the week-night service in the schoolroom of the Congregational Chapel, Milton-next-Sittingbourne. The chair was taken by

the Rev. J. Showard, pastor, who, after the opening hymn and prayer, introduced the lecturer with some cordial remarks. Miss Evans then gave an address on "The whole duty of man," as shown in Micah vi. 8: "What doth God require of thee, O man, but to do justly, to love mercy, and to walk humbly with thy God?" She showed that the three divisions comprehended the whole of man's duty to God and to his fellow creatures of all ranks, from man downwards; dwelling especially on the fact that men were enjoined to *love* mercy; not to dole it out, but to delight in it towards all the creatures God had made, because they were His. Various forms of cruelty to animals and birds were mentioned, and the cruelty and immorality of vivisection was pointed out. There was a good audience, who seemed much interested in the subject; and at the conclusion a great deal of anti-vivisection literature was given away.

MAIDSTONE.

On the 2nd of October Miss Evans spoke in the Old Palace, Maidstone, to a full meeting of the British Women and their friends. The chair was taken by Mr. Sage, and in the course of the evening Miss Evans, with the aid of diagrams, etc., explained fully what cruelties were being perpetrated by physiologists, many of whom were attached to our hospitals and medical schools. At the conclusion of the meeting a strong anti-vivisection resolution was passed unanimously, and the petition to the Home Secretary against licensing the Preventive Institute was numerously signed. Literature was eagerly asked for, many expressing their wish to circulate it.

SCOTTISH SOCIETY.

GLASGOW.

On the 27th September Col. Waterston, Secretary of the Scottish Society, held two meetings in Glasgow.

In the afternoon he lectured in the Christian Union Church on the subject of "Scientific Cruelty, what is it?"

In the evening he again spoke in St. James's Hall, Great Hamilton Street, on the subject, "Vivisection: What does it mean?" On both occasions there were large audiences, who listened with marked attention. Literature was freely distributed.

The Edinburgh and Glasgow Committees are making arrangements for a vigorous winter's work.

FOREIGN INTELLIGENCE.

RUSSIA.

We have received the very full and satisfactory report of the Riga S.P.C.A. It is evident that the Society is doing a great deal of very useful work. Financially also its position is excellent, while the members have increased in number from 659 at the beginning of 1895 to 750 at the end of June, 1896. In an appendix is printed the text of the petition presented by the Central Russian S.P.C.A. to the Russian Minister of Justice, praying for the amendment of the laws relating to cruelty to animals. From this it appears that in Russia vivisection may be practised not only by those who seek to excuse themselves under the plea of scientific investigation, but by any one who has the inclination. The whole of the students, who have as yet little or no scientific qualification, cut and torture living creatures without the slightest necessity, as according to the opinion expressed by leading professors, it is possible for them to learn quite as much by the dissection of dead bodies, as by vivisection. The petitioners therefore pray that there shall be at least as much restriction of vivisection in Russia as already obtains in England.

GERMANY.

From Germany we have received a quantity of literature, consisting chiefly of selections from speeches delivered at the Buda-Pesth Congress. The publication of these leaflets shows the determination of our foreign colleagues to strike while the iron is hot. In the collection we are pleased to see a reprint of Herr Rudolf Bergner's stirring address, in which he ridicules the idea of a society for the *protection* of animals tolerating for

one moment their vivisection. Dr. Paul Förster's address we notice in another column.

EXPERIMENTAL HANGING OF DOGS.

The *Thier und Menschenfreund* quotes from the *Vierteljahrsschrift für gerichtliche Medizin* that Dr. Ignatowsky, not satisfied with the usual explanation of the almost immediate unconsciousness in cases of death by hanging, carried out some experiments on dogs. After hanging it, he dissected each dog and drew up a report on the condition and position of the various organs and parts of the body. The additions to surgical knowledge were as valuable as usual.

EXPERIMENTS ON CHILDREN.

We take the following from the *Thier-und Menschenfreund*;—“Dr. C. V. Kahlden of Freiburg in Brunswick publishes in the *Centralblatt für Allgemeine Pathologie, &c.*, 1895, p. 122, a report upon the effect of diphtheria serum on the kidneys and heart, wherein he states the following facts:—(a) Out of 78 children (inoculated apparently for the cure of diphtheria) eight became confirmed in severe albuminuria. (b) It was proved by experiment that in the case of animals, albumen was always found in the urine after inoculation with the serum. (c) A three-year-old child who ‘out of charity’ had been inoculated on May 14th, with the maximum dose for diphtheria showed no traces of albuminuria on May 16th. On that day the child was again inoculated, this time with a slightly smaller quantity of the serum. On May 18th another inoculation took place, and on the 19th the little sufferer died, not from diphtheria, but from inflammation of the kidneys.” The report continues: “The material to hand as regards man is of too small a quantity to enable us to judge of the action of the serum on the kidneys.” It is evident that the material furnished by experiments on animals is in this case, as in so many others, altogether useless as regards man; and that many more poor human waifs will yet be sacrificed to supply “material” for the vivisector unless some strong hand intervenes.

ITALY.

SAD DEATH OF A VIVISECTOR.

The *Thier-und Menschenfreund* reports the death of Dr. Luigi Villa, of Milan, due to accidental self-inoculation while he was experimenting upon animals. He had been engaged for some time in trying to discover a serum which should cure glanders in horses. During his experiments he was about to inoculate a rabbit with glanders poison when he accidentally pricked himself with the point of the instrument. No ill effects could be traced until some days after, when it became evident that he was stricken with glanders. The leading Italian physicians did their utmost to save him but in vain. He died in June last. He was but 28 years of age and only six months married.

UNITED STATES.

In an article in the *Journal of Zoophily*, signed “C.E.W.” (initials by which we at once recognise the personality of Mrs. Caroline Earle White), there is a very interesting narration of some of the incidents of the opposition to the Bill introduced into the American Congress last year. We make the following extract:—

“It is, however, to one speech in particular that we wish to call attention, viz., that of Dr. Charles Wardell Stiles, of Washington, a practical physiologist or vivisector. In objecting to Section III. of the Bill (the section providing that no experiment shall be performed upon a dog or cat, horse, ass, or mule, except upon condition of a certificate being given in which it is stated that, for reasons shown in the certificate, the experiment it is desired to perform will be frustrated unless performed upon one of these animals), he says as follows:

“This section is based upon sentimentality,—old maids, having a fondness for cats and some people believing that dogs are almost human. The scientist cannot allow such ideas to enter into his work. Not only is the dog a convenient animal for experimental purposes in certain cases, but, if sentimentality is to enter into the question at all, we ought to be glad to turn a few of these useless, disease-breeding, and injurious, ownerless street-curs to some account. Why a disease-producing and property-destroying, ownerless cur, or a kicking mule should have any more consideration from Congress than a cow, pig, rabbit, chicken, or pigeon, is not clear to the scientist.

“Much has been said about the faithfulness of ‘old dog Tray,’ but when one studies the diseases he produces and the property he destroys,

one is compelled to admit that the dog is a greater curse than blessing, a greater enemy than friend, and more treacherous than faithful.”

“We have often spoken of the demoralization of character caused by vivisection in those who practise it. Where can we find a more complete instance of it than in the heartless speech of this cold-blooded vivisector? This man has lost the better portion of his nature—his power to appreciate generosity, fidelity, and devotion. He is dead to all the beauty of the dog's character, and its nobility makes no impression upon him. He speaks of this invaluable friend to man as being a greater curse than a blessing, in the face of the fact that without dogs many of man's most cherished wishes and intentions could not be carried out, and he would suffer almost incalculable loss in life, property, and everything that is dear to him.”

ANOTHER ANTI-VIVISECTION VICTORY.

We learn from several American journals, under date of Cleveland, Ohio, September 24th, that the delegates to the twentieth annual convention of the American Humane Association, late in session in that city, devoted most of their time the previous day to discussing that feature of modern surgery known as vivisection. The committee on resolutions reported, recommending the general adoption throughout all the States in the Union of the vivisection laws, regulating the practice of vivisection. The purport of the committee's report was that every member of the Association should lend his or her personal efforts to induce the different state legislatures which have no such laws, to enact such laws. The report of the committee drew forth a heated discussion on the matter. Dr. Tuckerman opposed the report of the committee, declaring that vivisection is a good thing. He argued that in case of a difficult surgical operation it is sometimes necessary to cut up a dog or a sheep to get points before cutting into a human being. Dr. Tuckerman had scarcely a supporter on the floor. All the other delegates argued that it was bad enough to have to cut up human beings, and an absolute crime to hack living dogs to pieces just for experimental purposes. The committee's report was finally adopted by a unanimous vote.

In the course of the convention, which sat for several days, an address was delivered by Dr. Albert Leffingwell on “The Regulation of Vivisection in the District of Columbia” which proved interesting. Dr. Leffingwell believed if vivisection was permitted it should be surrounded with such restrictions as to insure the subject against suffering.

ANNUAL MEETING OF THE ILLINOIS ANTI-VIVISECTION SOCIETY.

The fourth annual meeting of the Illinois Anti-vivisection Society, due June 1st and postponed for several reasons, was held September 4th, in the rooms of the W.C.T.U., the president, Mrs. A. K. Perry, in the chair. There was a full attendance of the society and a goodly number of the Union present. The usual preliminaries were followed by the report of the secretary, Mrs. Fairchild Allen. The report embraced a *résumé* of the year's work, which has exceeded that of any former year. The outlook indicates a still more vigorous prosecution of the work in the publication and distribution of literature, in correspondence, and by every other means possible, the creating of public sentiment in favour of the cause.

Present membership 326; life members paying from \$10 to \$350, forty-seven. There are eighty-six active vice-presidents working in twenty-seven States, circulating the petition, distributing literature, writing for newspapers and procuring funds. The society has over 200 regular correspondents—including sixteen in European countries—England, Scotland, Wales, Denmark, Germany, France, Italy and Southern India.

BOMBAY.

A good deal is being attempted to be made in India of the dangers of hydrophobia with a view to promoting the erection of a Pasteur Institute. In Bombay, however, there is little cause for alarm as the casualties from the malady in question are there, at least, singularly few. Dr. T. S. Weir, of the Municipal Health department of that city, has given a return which shows that the deaths in five years were as follows:—1890, 3; 1891, 8; 1892, 5; 1893, 3; 1894, 2. The population in 1891 was 821,764, so that only once has the mortality reached one in 100,000.

ANTI-VIVISECTIONISTS AND VEGETARIANISM.

The Editor of the *Vegetarian* published on the 3rd ult. the following communications, received in answer to the question: "Should public antagonists of vivisection be themselves necessarily vegetarians?"—

SIR ARTHUR ARNOLD writes:—

"No; it would be as reasonable to affirm that those who object to the torture of human beings should be opposed to all forms of punishment. I greatly respect and gratefully observe the Vegetarian experiment; but I have as yet seen nothing in its results to lead me to believe that an exclusively Vegetarian diet is, in our country, conducive to the most useful qualities of mankind. The energy of the world seems to me to come from the meat-eating peoples of the temperate zone. I observe this not without regret, because I am much attracted by the comparative purity of vegetable diet. But animal food is only part of the question. Leather, fur, fat, and bones are requisites."

The ✕ BISHOP OF NOTTINGHAM writes from St. Barnabas's Cathedral, Nottingham:—

"I believe, according to the Scriptures, the universal tradition of mankind, and the evidence of facts, that animals were given for the food and the use and benefit of man, but not for the purpose of pandering to, and pampering, the vice of cruelty."

"I therefore am not a Vegetarian, but eat meat."

"I also approve of moderate field sports; but I most strongly object to and detest the horrible cruelties of vivisection."

"It will not promote the anti-vivisection cause if one may not join it without also becoming a Vegetarian and ultra-humanitarian."

MRS. MASSINGBERD, of 22, Bruton Street, W., writes:—

"I entirely agree with you that the horrors of our slaughter-houses and cattle ships form one of the blackest blots on our national life, and I consider that our general indifference to the matter is a positive sin. But this is a meat-eating country, and though there are now a large number of Vegetarians amongst us, that number is as a drop in the ocean of the whole. I am convinced that it is a waste of time and energy to try and make converts to Vegetarianism—that is, speaking in the interests of the victims. The process is too slow. What is needed is that the great crowd of meat-eaters should be roused to a sense of their awful responsibility, to the actual sin they are committing in allowing these infamies to continue, and to the actual danger to health incurred by the eating of animals who have travelled under dreadful conditions. To become a Vegetarian personally is too often accepted as a sufficient sacrifice to the cause. It is not, as a matter of fact. A meat-eater who will take the trouble to find out how the meat he eats is killed, and who agitates for humane and wholesome methods, is of far more use than a Vegetarian who makes no protest against the shameful things he avoids. A Vegetarian does not sin in his own person, but his responsibility as a citizen, as a voter and a ratepayer, is not one atom the less because of that. It is every man's business to see what system is practised in the slaughter-house in his own district whether he eats meat or not. It is every citizen's duty to know what system is adopted in the country he belongs to, and to demand the best, even though he is a sworn Vegetarian. I fear you may not think my view of the matter likely to find favour, and I shall not be surprised if you do not publish it."

THE TUBERCULIN TEST.

The following correspondence is taken from the *Newcastle Courant*, September 26th and October 3rd:—

"SIR,—In the various papers read before the recent meetings of the Sanitary Congress, in the section of science and preventive medicine, frequent mention is made approving of tuberculin as a test for detecting tuberculous animals. Now, as I am unaware of any improvement having taken place in the method of applying the test during the last few months, I should like to draw attention to some important evidence of the danger and inutility of the test furnished by two expert authorities. In regard to the value of the test, Professor McFadyean, in 1895, made experiments, and reported the conclusions to the Royal Commission on Tuberculosis, which show that the tuberculin test is not worth much. The experi-

ments were performed on 75 cows. Taking the rise of temperature from the normal to 103 F. as an indication of tuberculosis, the test as revealed by *post mortem* examination was correct as indicating tuberculosis in 31 cases, and failed to indicate it in 5 cases. Taking the temperature under 103 F. as non-tuberculosis, the test was right in 20 cases, and wrong in 19 cases. The errors, therefore, are both of omission and commission, and a test which is, altogether, correct in 51 cases and wrong in 24 must surely be highly untrustworthy. As to the danger of this 'new science' Professor Brown, in a paper on 'The Use of Tuberculin and Mallein,' says:—"It has been proved that one effect of inoculating animals with tuberculin has been in some cases that of distributing the tubercle bacillus to parts of the body not previously affected." He further says: "The practice in question is more alarming from the fact that repeated injections of tuberculin have rendered animals insusceptible to it; and, therefore, if this result proves general, tuberculous animals, rendered insusceptible, might be sold by unscrupulous men with full assurance that the disease could not be detected by means of the test."

I have no faith in experiments, and my unbelief is strengthened by the experiments made with the tuberculin test, which give results differing widely from one another in the hands of different operators. Discoveries which endanger the well-being of the public, as in the case of Koch's "consumption cure" and by the diseasing of animals used for food, are of very questionable value.—I am, &c.,

JOSEPH COLLINSON.

79a, Great Queen Street, London, W.C.

SIR,—Your correspondent Mr. Collinson does good service to the public by directing attention to the specious exploiting at the Sanitary Congress held at Newcastle-on-Tyne of the value of the so-called anti-toxin tuberculin. Tuberculin is the toxic principle with which the German Dr. Koch claimed to cure tuberculosis, with the result that every patient on whom he employed it quickly succumbed. So determined are some medical men to advance therapeutic science, quite regardless of the welfare of their patients, that nothing short of an Act of Parliament prohibiting or restricting the use of certain anti-toxins can avail to protect the public from this new danger masked in the garb of a protector. Such at least is the opinion expressed by Professor Brown in his paper on "The Use of Tuberculin and Mallein." It has become a practice to inoculate cattle suspected of being tuberculous, with tuberculin, and to draw a conclusion from the reactions produced. Not only is it unreliable and misleading in its results when thus employed as a test, but by repeated inoculations animals may become irresponsive to its action, so that unprincipled dealers are able to offer tuberculous cattle for sale in the full assurance that the disease cannot be detected by the test. This is for society a very awkward phase of the anti-toxin question. If doctors are going to spend their time and talents in elaborating quintessences of disease, which, while killing the patients on whom they are employed, can be used to disseminate disease broadcast in animals used as human food, sane people will begin to realize the wisdom of Shakespeare's advice and "throw medicine to the dogs."—I am, &c.

MAURICE L. JOHNSON.

THE HUMANITARIAN LEAGUE.—Conjointly with the Leigh Browne Trust, this League, which has been in existence for six years, and has done much to rouse and educate healthy moral sentiment, has arranged an attractive series of Humane Science Lectures, to be given at St. Martin's Hall, Trafalgar Square, W.C. The special aim of the course will be to show that "an uncorrelated department of science tends to lose either life or balance." In particular reference to Biology the promoters of the lectures, while holding no aggressive position, affirm that any blunting of the sense of sympathy or coarsening of the moral instincts must necessarily tend to deaden that response of the mind to the unity of nature, which is essential to the highest order of scientific insight. The programme is as follows:—November 17th, "Natural Selection and Mutual Aid," by Peter Kropotkin; December 8th, "The Humane Study of Natural History," by J. Arthur Thomson, M.A.; January 19th, "The Treatment of Criminals," by the Rev. W. Douglas Morrison; February 9th, "Suggestion: its Place in Medicine and Scientific Research," by Dr. Milne Bramweil. Full information concerning the lectures may be had from Mr. Joseph Collinson, 75, Clovelly Mansions, Gray's Inn Road, W.C.

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Telegraphic Address: "Zoophilist, London."

1896
O.K.

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the
INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 8.]

LONDON, DECEMBER 1, 1896.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Duchess of Somerset and Sir Arthur Arnold have been elected Vice-presidents of the Victoria Street and International Society.

"SCIENTIFIC research," it appears, has been carried on at the Imperial Institute in London, and this department has also been enlarged there. We are glad to think, however, that in this case, up to the present there is no vivisection, or hint of it. Researches are to be confined to those bearing on chemical and commercial questions, and it will be one of the new duties of the opponents of animal torture to watch and take what steps may be needed to prevent the Institute being perverted to improper uses.

WE read with regret in the *Scotsman*, of November 7th, an account of the opening of a new research laboratory in Edinburgh for the Royal College of Physicians there. There had been a laboratory of the kind in Lauriston Lane for some years, but this had grown too small for

the modern greed of research. Hence the new institution, which has been converted out of what were formerly the offices of the City Parochial Board, at a cost of £10,000.

A VIVISECTOR lately died in the person of the redoubtable H. Newell Martin, formerly professor in the Johns Hopkins University, Baltimore, U.S.A. The *British Medical Journal* (November 7th), in recording the fact, summed up the result of his labours as follows:—"The development of experimental research in animal physiology was the object of his most earnest labour, and in this department of biology he made brilliant additions to literature."

THE *Practitioner* for November comments very severely on the "many foolish, sordid, spiteful, vulgar utterances" and the "rowdiness of particular individuals" composing the Ethical Section of the annual meeting of the British Medical Association at Carlisle this year. Dr. Malcolm Morris, the editor of the *Practitioner*, says: "I feel sure that I am expressing the general feeling in saying that the Ethical Section was a ridiculous failure, and in some ways a disgrace." As the British Medical Association and its *Journal*, edited by Mr. Ernest Hart, are so thoroughly committed to the defence of vivisection and so intolerant of the slightest opposition to scientific cruelty, we are not in the least surprised at the foolishness, spitefulness, and vulgarity of some of the rowdy persons connected therewith. They act and speak after their kind.

"Arvid Kellgren" and "Carlo Colombo" are the very English names of two experimenters, who, in the *Medical Press* of the 30th of September, had "the very agreeable duty of expressing their sincere thanks to Dr. Woodhead, Director of the laboratories of the R.C.P. Lond., and R.C.S. Eng., for having placed his services and advice so freely at their disposal."

A MEDICAL man replying recently to one of our lecturers, who is not a doctor, declared that motor nerves only and not sensory are stimulated by electricity in vivisectional experiments and that as the motor nerves do not convey painful sensations there could be no cruelty in the proceeding. This is a fair sample of the tricks our opponents often condescend to when no medical man on our side is present to contradict such statements. Of course the answer is that each of the thirty-one pairs of spinal nerves which arise from the spinal cord have two roots, an anterior which is motor and a posterior which is sensory.

Now the late Professor Sharpey admitted before the Royal Commission (Q. 464) that, exposing the spinal

cord and laying bare the roots of a nerve is a very painful operation. So much for the roots of the nerves. Then again certain nerves like the sciatic are mixed nerves, *i.e.* composed of both motor and sensory fibres, and inflammation of such a nerve causes severe pain and tenderness together with paralysis of the muscles to which the nerve is distributed. The fifth nerve of the head, called trifacial, has motor and sensory roots also. There is abundant evidence that nerves of sensation are stimulated by electricity in experiments—thus Dr. G. W. Stewart says (*Journal of Physiology*, vol. xv., p. 63) "Stimulation of the central end of a nerve like the sciatic usually affects the pulmonary circulation time but little."

It is extremely difficult to say definitely what parts of the nervous system are purely motor and purely sensory. Dr. Mott, Lecturer on Physiology at Charing Cross Hospital says (*Journal of Physiology*, vol. xv., p. 464) "It has long been a matter of dispute among physiologists and neurologists whether the central region of the cerebral cortex should be considered primarily sensory, sensori-motor, or purely motor."

It appears that Professor Koch was in London on the 12th of November. He was *en route* for Cape Town, *via* Southampton, in quest of the bacillus of rinderpest. The *British Medical Journal* (Nov. 14th), referring to this matter, said it trusted "that on his return he (Koch) may have not only added another bacillus to the already long list of the present described varieties, but will have, in addition, conferred another benefit on humanity at large, of equal importance to the results of his previous investigations." This is not only guarded but ambiguous language. "Of equal importance to the results of his previous investigations" reminds us of his cholera and tuberculosis discoveries, both of which ended in a fiasco.

THE first of the usual annual series of lectures prescribed by Mr. Thomas Brown, founder of the Brown Institution, Wandsworth Road, was delivered by Dr. J. Rose Bradford, the new professor-superintendent, on the 3rd of November. As is now well known, Mr. Brown had benevolent intentions towards animals in founding the Institution, and Dr. Bradford stated that during the last year "between 5,000 and 8,000 cases of disease in various animals had been treated." So far good. But he went on to say that "In the laboratories . . . investigations had been proceeding on cancer, leprosy, the tsetse fly, and especially rabies." These are experimental investigations involving the torture of animals, and the cruelties entailed thereby outweigh all the benevolence involved in the treatment of diseased animals. It is a little extraordinary, we may remark, that scientific people, such as are in charge of the "Brown," cannot keep a closer record than that of "between 5,000 and 8,000 cases." Their apparent inability to do so casts a shadow over their scientific claims. Their vivisections cast a further shadow over those claims, and it is morally certain that Mr. Brown never intended his money to be used for this latter purpose at all.

ON the 30th of October, the Queen of Portugal, being in Paris, paid a visit to the Pasteur Institute. Before leaving she was shown into the unfinished crypt, where the remains of Pasteur are ultimately to be placed. At

her departure she is reported (*Paris New York Herald*, October 31st) to have said:—

"Thanks to you, Monsieur Roux, we have been able to save, in my new country, a large number of children condemned to death by diphtheria. I am deeply grateful to you. Now discover for me the cure for tuberculosis—in Spain, as in France, it causes terrible ravages."

Her Majesty herein, innocently, no doubt, set Dr. Roux a poser. By the tuberculin treatment consumptive patients were made worse, and it remains still to be proved that by any like process diphtheritic patients are made better. It is certain they go on dying at a greater rate than ever, not only in Paris and London, but in Philadelphia.

FOR months past we have again and again given the statistics of diphtheria mortality in London on the authority of both the *Lancet* and the *British Medical Journal*. Time was, and not so long ago, when the last-named of these publications was very constant in publishing from week to week reports from various medical men of the achievements with anti-toxin in fighting diphtheria. Now all that is changed, and instead of the light-hearted puffery of anti-toxin we have such lugubrious reports as the following, taken from the *Medical Journal* of November 7th:—

"There was an increase last week in the number of fatal cases of diphtheria registered in London, no fewer than 64 deaths from this disease being recorded, against 52, 66, and 57 in the three preceding weeks. This number exceeded by 20 the corrected average for the corresponding week in the ten preceding years."

So that, with anti-toxin, which was to prove a sovereign balm, the world is actually worse off in regard to diphtheria mortality than it had been for many years before its introduction. In this connection we draw special attention to two letters published last month in the *Western Morning News* of Plymouth, one written by Dr. Berdoo and the other by Mr. Bryan, wherein attention is called to various passages in a report of the highest importance by Dr. Winters, of New York. This gentleman, who occupies a high position among his brethren of the medical profession, refuses to believe any longer in anti-toxin. He will not be scientist-ridden, as are some men at home, and judging from the way in which he has gone into all the questions connected with the use of anti-toxin, and the convincing nature of the case he has made out, it seems safe to say, that as far as America is concerned, faith in the nostrum is destroyed.

WHEN petitions to Parliament are sent out from Victoria Street the necessity for an exact observance of the rules laid down is always impressed on those friends who so kindly undertake to obtain signatures. We fear that sometimes the conditions are regarded as needlessly strict; but the following "Observations of the Committee on Public Petitions" for the past Session will show the importance of having them literally observed:—

"Your Committee have, in the case of some Petitions, reported to the House the number of names appended thereto, but they are of opinion that many of them are in the Same Handwriting, and consequently not in that of the persons whose names are attached, and that the Orders of the House, which require that every Petition must be signed by the persons whose names are appended thereto by their names or marks, and by no one else, except in case of incapacity by sickness (*vide* Commons'

Journals, 1675, Nov. 8; 1698, Nov. 14; 1774, June 2; 1826, Dec. 13; 1836, June 28), have not been complied with.

"Your Committee also observe that, in the case of some Petitions, there are names written on Slips of Paper and attached thereto; but your Committee, having regard to the Orders of the House respecting Signatures to Petitions, have not reckoned such Names among the Signatures.

"Your Committee observe also that, in the case of some Petitions, the Addresses of the Petitioners are not attached thereto; but, having regard to the Orders of the House respecting Signatures to Petitions, they have not recorded the number of Signatures to the said Petitions."

It is well to observe the Parliamentary conditions in regard to all petitions, to whomsoever addressed, when the habit which will thereby be formed will secure for our memorials the greatest possible weight on all occasions.

THERE is a new and fashionable disease called Appendicitis, or inflammation of a certain worm-like portion of the intestines. The *appendix vermiformis*, as the anatomists call it, has the bad habit of collecting fruit pips or stones, small bones, pins, etc.; these set up inflammation, and then a serious operation is considered necessary. Of course the vivisector has something to say in the matter, and the *Quarterly Medical Journal* for October (p. 70) tells how Drs. Roger and Joyvé have attempted to cause the disease in rabbits by inserting balls of sealing wax in the animals' bowels. Of course pain and disease ensued, but we read that—

"The authors point out that their results are not in accordance with the pathological features observed clinically in man. . . . Their experiments were made in each case on a healthy appendix submitted to rough usage to produce the experimental disease. In man and in the course of the natural evolution of the malady we have to do with an organ previously in a morbid state."

Just so, and this applies to all such artificial modes of producing disease for experimental purposes.

SIR B. W. RICHARDSON, writing in the *Asclepiad* (No. 43, Vol. XI., p. 346) on the deaths at the Pasteur Institute from hydrophobia, said that since the month of August there have been six deaths of patients treated there from hydrophobia, but in five of the cases the animal which inflicted the bite was certified by a veterinary surgeon to be mad. "These cases," says Dr. Richardson, "do not speak in favour of a supposed remedial method, which on the ground of its validity should not logically have allowed a single one of the deaths to have taken place."

THE London correspondent of the *Manchester Courier* stated in that journal, on the 17th ult., that another year's returns of diphtheria cases treated with anti-toxin is being prepared. This, he says, will show that out of 282 patients treated with anti-toxin only one died "and that, it is said, owing to an inaccurate diagnosis." This statement seems to call for the question whether the diagnosis was directed to ascertain that the cases admitted were not likely to prove fatal, so as to admit only those showing a strong *prima facie* chance of recovery? That only one patient out of so many should die in the hospitals of the Asylums Board is most extraordinary, because in London at large, according to a return made up by Dr. J. A. Dixey, and published in the *British Medical Journal* on the 22nd of August, the total deaths from diphtheria in the year ended June last amounted to no fewer than 2,695. All the time or

nearly so, the mortality was far above, sometimes double, the mean of ten preceding years. That the mortality in the Metropolitan Asylums Board Hospitals was nevertheless practically *nil* is beyond belief.

A DOCTOR opposing one of our lecturers at a recent meeting instanced the discovery of the use of "Murphy's Button" in the surgery of the intestines as one of the triumphs due to the vivisection of dogs. This invention consists in joining divided portions of the bowel by means of a metal button. The plan seems to answer very well for a time, but experts make many serious objections to it. It acts as a foreign body in the intestine, and has many dangers of causing obstruction. Mr. Mayo Robson, F.R.C.S., strongly condemns its use in the *Medical Annual* for 1895 (p. 340).

THE *Lancet* of October 17th is responsible (Rome letter) for the following anecdote of the late Professor Moritz Schiff, on whose recent removal by death the animal world is to be sincerely congratulated, though we fear his ill deeds will live after him in the students whom he has infected with his misguided enthusiasm for heartless "research":—

"The Italian press, lay as well as professional, teems with biographical detail regarding the late Professor Schiff, of Geneva, whose noble services to the country's medical schools are all the more remembered from his having been driven from his Florentine chair by an anti-vivisectionist agitation largely fomented by 'zoophilists' and homœopathists. His first wife, according to one biographer, was a Rothschild, who made it a condition of his sharing her fortune and faring sumptuously every day that he would absolutely renounce his experiments on living animals. For a month after marriage he tried to accept the situation but could stand it no longer, and at the end of that time he had accepted the simpler life with the return to the laboratory."

The noble "services" of Professor Schiff, over which this writer waxes so eloquent, were, as our readers well know, exploits of the cut-throat order, and of a quite peculiar atrocity at that.

THE *Lancet* of October 10th contained an account of two cases of poisoning from eating honey. The patients recovered after manifesting a series of very distinctive symptoms. The inquiring mind of the presiding doctors, not satisfied with this experience in the human frame, made an extract of the honey with alcohol, and administered doses of it to two cats. These animals were made extremely ill, but all to no purpose so far as adding anything to the knowledge of what happened to the human patients is concerned. Nor did chemistry throw any light on the problem, for analysis discovered nothing—not even a microbe.

THE *New York Medical Record* for November, in a vigorous editorial article exposes the false pretences of the doctors who assert that cancer can be cured by the toxins of erysipelas. We are not surprised to learn that Dr. Coley's experiments have terminated in the profoundest disappointment. "Surprisingly good results were shown, but a close following up of the cases has resulted again and again in disappointment. Patients looked upon as cured would sooner or later turn up in the practice of other physicians, or return to report themselves only temporarily improved." The New York Medical Society has reported that the inoculations are dangerous, disappointing, and have the effect of delaying an operation for removal of the cancer till it is too late to perform it.

THE LATE MISS LLOYD.

VOTES OF SYMPATHY WITH MISS COBBE.

At a meeting of the Central Executive Committee of the Victoria Street and International Society, held at 20, Victoria Street, on the 4th of November, the following resolution was unanimously passed, and forwarded to Miss Cobbe:—

"Resolved that this Executive Committee, at its first meeting since the loss of Miss Lloyd, of Hengwrt, formerly one of its members, desires to record its deep sense of regret at the sad event, and tenders to Miss Frances Power Cobbe the expression of its affectionate sympathy on the severe personal loss she has sustained; further, that a copy of this resolution be sent to Miss Cobbe, and that it be entered on the minutes of the Society."

The Manchester Branch of the Society was also moved at its November meeting to unanimously resolve as follows:—

"That the members of the Committee of the Manchester Society for the Protection of Animals from Vivisection, in common with all other friends of the Cause, deplore the death of Miss M. C. Lloyd, and desire to express their true sympathy with Miss F. Power Cobbe in the loss of this devoted friend, who, as one of the founders and chief supporters of the Victoria Street Society, has shared with her in the arduous work of fighting against the cruelties committed in the name of science."

TOTAL OR PARTIAL ABOLITION?

(By "SPERO MEDIORA," IN THE "ECHO," NOV. 13th.)

As there appears to be some ground for the many complaints made against vivisection as worked at present, it would perhaps, be as well to modify, to some extent, existing legislation on the subject. But one thing we must be aware of, on no account must difficulties be thrown in the way of genuine research: far better that present abuses upon men and beasts should be indefinitely multiplied than that the cause of this most important branch of science should be impeded. The difficulty in all reform is to preserve the golden mean, and to avoid being carried away by an ignorant and untrained enthusiasm.

Does this sound all right? That is the sort of way that some people try to hedge when they are afraid they may prove on the losing side, or act as dead weights by clinging on to the skirts of the movement. Would these prudent folk really go so far as to limit the privilege of vivisection to eminent scientists only? That would be rather too bad. Let us be fair, and give others the opportunity of some of this torturing fun, let the second-rate artists have a chance as well as the big bosses, and let the poor students, too, have a chance as at present of getting their hands in and distinguishing themselves. It is just these eminent scientists who are the chief criminals. It is they who are responsible for the crimes committed in the mutilated name of Science. They are the great examples who have set in motion hosts of petty emulators, corrupting youth, and teaching it, directly and indirectly, to become as unscrupulous and indifferent to the sufferings they cause as they are themselves. It is through these men that so many who would otherwise be innocent in this respect have become enthused with the love of this noble science of torture, and though any amount of enthusiasm is encouraged on the side of this scientific cruelty, yet we are told that any enthusiasm that would seek to put a stop to it is ill-advised, mere sentimental fanaticism, would do more harm than good, and so on. Pasteur said, "I am naturally a kind-hearted man, but in experimenting I have no scruple." And this unnatural monstrosity is the idol of these science (sic) worshippers, whom if they do not imitate in ability they do not fail to imitate in the absence of all compunction. But to those not blind to facts, figures, and evidence, the failure of this man's greatest invention is apparent; and yet his name remains one to conjure with, and this very invention so blown upon flourishes apace, and the whole system of vivisection, that has little else to commend it but its danger, mischief, and dastardly deeds, continues to develop itself in spite of all. And why is this so? For the excellent reason, among others, that are very well

known, that *knowledge* rather than *utility*, is the chief motive at work.

With the revelations of shameful crimes and abuses fresh before us, are we really going to allow the principal actors in this movement in England to continue their work comparatively unchecked, and dictate to us, as at present, what amount of torture they choose to consider necessary? What is the use of working for such an end as this? . . . No, Sir, Don't let us follow the usual course of Bumbledom in this matter, and come down upon the small boys or the bunglers while we allow the big nuisances and originating causes of mischief to do their worst. It seems rather a singular idea to allow immunity only to the worst offenders, as would happen in the event of only partial suppression of these practices.

RETURN OF LECTURES AND MEETINGS.

The following is a return of the lectures and meetings, arranged at the instance of the Victoria Street and International Society, which have taken place as stated below:—

Date.	Lecturer or Speaker.	Place of Meeting.
1896.		
Sept. 9 } to " 30 }	Mr. T. A. Williams	Leeds.
" 24 }	Mrs. Chas. Mallet	Peckham Rye.
" 29 }	" "	King's Heath, Birmingham.
Oct. 1 } to " 14 }	Mr. T. A. Williams	Hull.
" 5 }	Mr. A. Westcott	Patriotic Club, Clerkenwell.
" 7 }	" "	Progressive Club, Camberwell.
" 9 }	Mr. A. Westcott	Grove Schools, Battersea.
" 9 }	Mr. R. S. Wood	Liberal Club, Enfield.
" 12 }	Mr. A. Westcott	Co-operative Society, Grays.
" 14 }	" "	
Oct. 15 } to " 14 }	Mr. T. A. Williams	Derby.
Nov. 6 }	Mr. A. Westcott	Progressive Club, I. of Dogs.
Oct. 18 }	Mr. " "	Radical Club, Mildmay Park.
" 21 }	Mr. A. Westcott	Tee-to-Tum Club, Shoreditch.
" 22 }	Mr. R. S. Wood	Socialist Club, Battersea.
" 25 }	Mr. A. Westcott	Reform Club, Newington.
" 25 }	" "	Sydney Hall, Battersea.
" 26 }	" "	Liberal Club, Enfield.
" 27 }	" "	Socialist Club, Bermondsey.
" 28 }	Mr. A. Westcott	Protestant Mission Church,
" 28 }	Mr. R. S. Wood	Queen's Road.
" 29 }	Miss Alison Garland	Long Sutton, Cheddar, Somerton & Bridgwater.
Nov. 6 }	Mrs. Chas. Mallet	Reading.
Oct. 30 }	Rev. T. Perkins	Working Men's Club, Chiswick.
Nov. 1 }	Mr. A. Westcott	National Secular Society, Camberwell.
" 1 }	" "	Emmanuel Institute.
" 2 }	" "	Social Democratic Federation, Bermondsey.
" 3 }	" "	Co-operative Society, Grays.
" 4 }	" "	Radical Club, N.E. Bethnal Green.
" 5 }	Miss Alison Garland	Long Sutton, Cheddar, Somerton & Bridgwater.
" 6 }	Mr. A. Westcott	Liberal Club, N. Camberwell.
" 8 }	" "	Unity Church, Islington.
" 8 }	" "	Labour League, Poplar.
" 9 }	" "	Radical Club, Paddington.
" 11 }	Mr. A. Westcott	Reform Club, Newington.
" 11 }	Mr. R. S. Wood	Ward's Studios, Belgravia.
" 12 }	Mr. R. S. Wood	Labour League, Lambeth.
" 12 }	Miss Alison Garland	Wimbledon.
" 12 }	Mr. A. Westcott	Radical Club, Boro of Bethnal Green.
" 13 }	Mr. R. S. Wood	Social Democratic Federation, Kensal Town.
" 13 }	Dr. Berdoe	Patriotic Club, Clerkenwell.
" 15 }	Mr. A. Westcott	Social Club, Bermondsey.
" 15 }	" "	Christ Church Club, Regent's Park.
" 16 }	" "	Christ Church Schools, I. of Dogs.
" 17 }	" "	
" 18 }	" "	
" 19 }	" "	

THE PROPOSED PASTEUR INSTITUTE FOR INDIA. MEMORIAL TO THE GOVERNOR-GENERAL.

The memorial, which is given in full below, signed by Lord Coleridge, Lord Leigh, Viscount Pollington, Sir Henry Hawkins (Judge of the High Court), Bishop Mitchinson, Mr. G. W. E. Russell, Sir Arthur Arnold, Mr. John F. Norris, Q.C. (ex-Indian Judge), Mr. Mark Thornhill (late Judge of Saharunpore), Mr. W. Theobald (late Deputy-Supt. Bengal Geological Survey), Mr. Wm. Tebb, Mr. Dadabhai Naoroji, Mr. Passmore Edwards, Dr. G. W. Leitner (Oriental Institute, Woking), was despatched to India on the 6th of November, for presentation to his Excellency the Governor-General:—

To His Excellency the EARL OF ELGIN and KINCARDINE,
G.M.S.I., G.M.I.E., Governor-General of India.

MAY IT PLEASE YOUR EXCELLENCY,
The humble Memorial of the undersigned,
SHEWETH,

I. That funds are being raised in India for the foundation and endowment of a Bacteriological Institute on the model of the Institut Pasteur in Paris, and that information obtained from the *Times of India* of the date of the 1st September last, shows that "the Government of India at the outset promised assistance to the extent of Rs. 8,000 annually, and it is understood they are ready to give further aid;" while the Bengal Government has also offered a donation of Rs. 10,000 and Rs. 5,000 a year for five years, on certain conditions (*Times of India*, September 11th, 1896), and appeals have been also made to the Governments of other Presidencies to act in the same manner.

II. That your Petitioners are informed that the work of such Institutes consists largely in the investigation and preparation, for the inoculation of human subjects therewith, of various toxic substances from the bodies of living animals in which diseases have been artificially induced.

III. That not only is the sacrifice of animal life involved in this proceeding contrary to the religious principles of the native races, but also the injecting into the human body of such substances is, in their eyes, a revolting and shameful pollution, violating their most sacred tenets and involving loss of caste. The enforcement of it, therefore, under Governmental sanction, threatens to lead to serious disaffection if not actual rebellion against English rule.

IV. That in one case at any rate in India a native has already been compulsorily inoculated with such animal substance, professedly to ward off the attacks of cholera, and much bitter feeling has been excited thereby.

V. That it has been stated on high authority that cholera is solely a water-borne disease, and may be stamped out in India, as it has been in England by rigid sanitation and a purer water supply, which if carried out would render unnecessary the objectionable inoculation.

VI. That your Petitioners have observed that a statement has been published (*Times of India*, September 10th, 1896), to the effect that the native papers have all along opposed the establishment in India of an Institute of the kind indicated, and the journal *Native Opinion* has observed that "In view of statistics showing its failure, preference to the same scheme by some is tantamount to riding a hobby horse with a vengeance."

VII. Your Petitioners humbly submit that for the reasons stated above there is ground for authoritative intervention in order to avert the creation of discontent among the people of India, and possible difficulties for the Government of the Eastern Empire of the Queen.

They therefore pray that you may be moved to intervene to prevent the consummation of the project.

REQUEST FOR A DEPUTATION TO THE SECRETARY FOR INDIA.

The Committee of the Victoria Street and International Society having forwarded to Lord G. Hamilton a request that he would receive a deputation on the subject of the proposed Institute, the following reply was returned:—

(Copy)

India Office, 10th November, 1896.

Dear Sir,—I am desired to acknowledge the receipt of your

letter of the 5th, asking Lord George Hamilton to receive a deputation from the Society for the Protection of Animals from Vivisection, on the subject of the establishment of a Pasteur Institute in India.

His Lordship desires me to say in reply that, having regard to the representations which he has received on the subject, he has addressed a despatch to the Government of India as to the action being taken in regard to the Institute, and that, until he has received the information asked for, he is not in a position to express any opinion.

In these circumstances his Lordship would prefer not to receive the deputation, and he will be glad if you will submit to the Committee of the Society the reason which compels him to decline their request.

I am, yours faithfully,

Benjn. Bryan, Esq.

(Signed) RICHMOND RITCHIE.

THE SALE OF VIRUSES AT THE PASTEUR INSTITUTE.

(FROM THE "JOURNAL DE MEDECINE DE PARIS," October 4th.)

It is well known that for some years past the Pasteur Institute has been converted into a commercial establishment, a kind of manufactory of pharmaceutical products destined to be employed for subcutaneous injections.

Our readers are aware that there are sold in the Rue Dutôt the anti-toxins for diphtheria, puerperal fever, etc.; they know that beyond this the establishment has obtained a monopoly for the fabrication of various other products. What they do not know, however, is that the Pasteur Institute has extended its operations, and that it now makes viruses for the destruction of obnoxious animals—in a word, manufactures insecticides.

A learned foreigner attached to the manufactory, M. Danysz, lately discovered a virus which for rats and mice is deadly. Its use, extolled by means of systematic advertisements, has not given the results expected.

M. Éloire, a veterinarian, well known in the Department of the Aisne, has published in the *Progrès Agricole* of Amiens, an article in which he avows with regret that he has conscientiously applied the alleged specific of Danysz, and that it has completely failed.

Not content with this announcement, M. Éloire states that others of the preventive viruses against the maladies of animals which are vended through the Pasteur Institute are equally inefficacious, and these facts have suggested to him the writing of the following letter, which the successors of Pasteur ought seriously to study:—

"It is not, besides, the first time that complaint has had to be made of the products of the establishment of the regretted Pasteur. The vaccine for chicken cholera was only the beginning of a series of gross blunders. For instance, it occurs to me that the cholera virus for rabbit extermination completely exploded in the hands of M. Loir, a pupil and relative of the Master in Australia. The vaccine for *charbon* in cattle gave me last year much cause for serious sorrow, and the mortality in my herds prevailed after as much as before their inoculation had been carried out.

"I will pass, however, to a question still more interesting. The inoculation for rabies leaves only too much, on which we ought to insist, to be desired. As to the virus of Danysz it continues the unfortunate series of preparations lacking the stamp of warranty (*non contrôlés*), which are sold at their weight in gold, while not of the value of an iron nail.

"I am far from denying the discoveries of the distinguished French master of science; I am myself one of his clients in the use of his vaccine, and it is precisely from this fact that I find that the products of the Pasteur Institute are but too often lacking in that efficacy which one has a right to expect in the products sent out by such an Institution, the outer label of which by no means always indicates the value of the contents.

"AUG. ÉLOIRE."

The accusation emanates from far too good a source, observes the editor of the *Journal*, not to find an echo in the medical and veterinary world. Dr. Roux and Mr. Duclaux, successors of the distinguished founder, have a serious duty to fulfil. Let us hope they will not fail to do it.

CORRESPONDENCE.

ANTI-VIVISECTION HOSPITAL.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—If you can find space I should like to allude to a few points with regard to the idea of the possible establishment, sooner or later, of an anti-vivisection hospital, which at first seemed to me a peculiarly excellent notion; but certain difficulties or objections have since occurred to me which, I think, ought to be seriously considered. Our position is not at all parallel to that of the promoters of the Temperance Hospital, whose object was to demonstrate the possibility of successful treatment of disease without alcohol, whereas no one doubts the possibility of successful treatment of disease without the performance of vivisectional experiments relating to the patients' particular cases. Another point to be considered is, whether for Anti-vivisectionists to maintain such a hospital *themselves*, as they might largely have to do, would not be a very uneconomical way of promoting the abolition of vivisection, as their money would be spent on the treatment of patients, a very excellent object, but certainly not their peculiar one; so that, before taking any decisive action, we ought to be sure that sufficient funds would be forthcoming, either by the deflection of subscriptions of humane persons from hospitals having performers or advocates of vivisection on their staffs, or by frequent collections of a large number of small contributions from the patient class, whose well-grounded fear of personal insecurity from experiment in other hospitals ought to induce them to support ours with peculiar alacrity. Of this latter source of income I was at first hopeful, but may have considerably over estimated it. I suppose that at least one of our chief objects in the foundation of such a hospital were it ever to be undertaken, would be to show that there exists among the patient class, as may be the case, a special readiness to support a hospital, in preference to all others, which is entirely free from men whose opinions on the question of the rights of whatever is helpless would be likely to predispose them to experiment on patients otherwise than for their cure; but if such a hospital is to benefit the anti-vivisection cause at all in this way, is it not clear that it can only do so by achieving *unusual* success in collecting from this section of the public, and that if we fail in this we shall do ourselves more harm than good?

Yours faithfully,
LESTER REED.

19, South Park Hill Road, Croydon.
Nov. 9th, 1896.

PROFESSOR LAWSON TAIT AND THE LATEST CLAIM FOR VIVISECTION.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—The Women's Liberal Federation held its annual conference in June last, and it will be in the recollection of your readers, that among the questions which the Federation discussed, was that of Vivisection. Professor Victor Horsley went to the Federation Conference to take part in the debate upon this one question, but he was ably answered by several speakers, who had made the question as close a study as himself, and without being weighted with that professional bias, which makes an impartial and comprehensive judgment an impossibility. During the discussion Miss Helen Gladstone is reported to have said that she had had an operation performed upon her, that could not have been so performed, but for its results first observed upon animals. This statement appeared to me to be very true, or very false, and at the time I wrote to a London daily paper, asking that the matter might be referred to Mr. Horsley and to Mr. Tait, as representing the vivisection and the anti-vivisection positions, so that the truth of the matter might be settled. I sent the suggestion to Miss Helen Gladstone. I enclose a copy of Professor Tait's letter to myself, and remain, Sir, yours truly,

T. A. WILLIAMS.

[COPY.]

The Crescent, Birmingham, August 13th, 1896.

Dear Sir,—It is a very difficult thing to discuss a statement so purely personal as that made by Miss Gladstone, but I am sure her statement can be based only on inaccurate information. I do not

know what operation Miss Gladstone has been subjected to, but I do not know of any operation in the whole realm of surgery concerning which what Miss Gladstone says is true. Yours truly,
Mr. T. A. Williams. LAWSON TAIT.

P.S.—In another letter Mr. Tait inquires if the operation has been named. Will friends of Miss Gladstone draw her attention to this letter of Professor Tait's?

T. A. W.

OUR CAUSE IN THE PRESS.

DÉCLAT AND LISTER.

(FROM THE "CHEMIST AND DRUGGIST," OCT. 24TH.)

SIR,—In your issue of yesterday's date you ask the question, "What has become of Déclat?" Of late years little has been heard of the inventor of antiseptic treatment, and in all probability he has given up the struggle for recognition, hoping to receive in the next world the meed of praise which has been denied him in this, if, haply, medical questions have any locus on the other side of the grave. But in former years he made protests vigorous enough, and with very good reason. In 1882 Dr. Marion Sims, at a meeting of the Academy of Medicine of New York, ascribed the invention of antiseptic treatment to Lister, whereupon Déclat addressed a letter to the President of the Academy claiming the honour for himself. He says in this letter that he sent a copy of his book on "Carbolic Acid," published in 1865, to Sir J. Y. Simpson in Edinburgh, and he maintains that this (not sewage) was the source of Lister's information on the subject. Lister first used carbolic acid in 1867—that is, six years after it had been in use by Déclat. The facts were also communicated by Déclat to Simpson by letter, and this led Simpson to accuse Lister of plagiarism. Moreover, Pasteur himself, in his "Études sur la Bière," 1876, page 44, says:—"Dr. Déclat has founded a complete treatment of infectious diseases on the employment of one of the best of antiseptics—carbolic acid." In the official report of the Academy of Sciences of Paris of March 11, 1878, Professor Sédillot ascribed to Dr. Déclat the priority of the invention of the antiseptic method. In the face of these facts, some acknowledgment of Déclat's claims is surely called for on the part of Sir Joseph Lister.

Your obedient servant,

30, Clarges Street, W.,
October 18. JOHN H. CLARKE, M.D.

ANTI-TOXIN AND DIPHTHERIA.

(FROM THE "WESTERN MORNING NEWS," PLYMOUTH, NOV. 3.)

SIR,—I have long ceased to believe in medical statistics. Dr. Billings used to say, "You can tell as many lies with figures as with words, and bigger ones." In the case of diphtheria it all depends upon the method of keeping the accounts. Then you can prove what you like. In the recently published reports of the Metropolitan Asylums Board we are informed that cases of such severity that they were not likely to recover were not treated with anti-toxin, obviously because each death would count against the new remedy. Of course, it was employed in the mildest cases, which would have recovered under any antiseptic treatment. But Mr. Whitworth is enamoured with statistics, and to them we will go. I have just received from Dr. Joseph Winters, Professor of Diseases of Children in New York University, a book entitled "Clinical Observations upon the use of Anti-toxin in Diphtheria." It contains a report of his personal investigation of this treatment in the principal fever hospitals of Europe during the summer of 1895. From this work I extract the following statistics:—"In the Villard Barker Hospital, New York, there was in 1895 a mortality of 10.6 per cent. greater with anti-toxin than without in 1894. In the New York Foundling Asylum in 1894 (non-anti-toxin year) 24 per cent.; mortality in 1895 (anti-toxin year) 45.7 per cent. In the Municipal Hospital, Philadelphia, the mortality with serum was 28.1 per cent.; without serum 25.9 per cent." Dr. Winters says—"When one studies carefully the reports of the Metropolitan Asylums Board from 1888 to 1894, and compares them with the mortality in the managers' hospitals in 1895, that the mortality was higher with anti-toxin than it would have been without." (p. 44.) We must not forget that the serum has its own special dangers

—disease and even deaths have frequently been caused by it. Nor must we overlook the fact that when the disease is diagnosed in time and promptly treated it can, under the care and good arrangements of a hospital, in a large proportion of cases be arrested by ordinary means.

London.

EDWARD BERDOE, M.R.C.S., &c.

SIR,—As your correspondent, Mr. William Whitworth, refers to the average death-rate from diphtheria in New York having been reduced to 17 per cent. by the anti-toxin treatment, allow me to say that I have just received a copy of an exhaustive report by Dr. Joseph E. Winters, of New York, on the subject. Dr. Winters is Professor of Diseases of Children, Medical Department, New York University, and he says, "That percentage of mortality is not only misleading, but is absolutely worthless unless accompanied by the actual number of cases reported and the actual number of deaths." Beyond that he remarks that "Behring told us his treatment to be effective must be applied early in the disease; to get the maximum effect toxin and anti-toxin must be applied at the same moment and at the same spot." An obvious impossibility. But in spite of Behring having said this, the thick and thin supporters of the anti-toxin treatment of diphtheria continue to behave and to argue as though Behring had never said anything of the kind.

Dr. Winters devotes an interesting section of his report to the injurious effects of anti-toxin, and quotes an absolute crowd of authorities, residing in all parts of the world, in proof that these injurious effects are operative. He says he has been charged with being prejudiced against anti-toxin, but adds, "It is monstrous to speak of it—a prejudice against anything which could do any good in such a case as diphtheria! A man who would have a prejudice against a specific for diphtheria should not be allowed to practice medicine. If there is a specific for diphtheria 'I want it.'"

We need not, however, go to New York for information to warn us as to the fallaciousness of the claims for anti-toxin as a specific against diphtheria. Let us look in the *British Medical Journal* of Saturday last and there we see it stated that "There was a considerable increase last week in the number of fatal cases of diphtheria registered in London, no fewer than 66 deaths from this disease being recorded, against 61, 69, and 52 in the three preceding weeks." But that is not all. The *Lancet*, the other leading medical paper, has frequently recorded during the past two years, when the use of anti-toxin has been in full practice, a constantly increasing death-rate from diphtheria. If anti-toxin lowered the average per cent., it ought to lower also the total death-rate; but this it has not done.

BENJN. BRYAN,

Secretary Society for the Protection of
Animals from Vivisection.

20, Victoria Street, London, S.W.

(FROM THE "WESTERN MORNING NEWS," NOV. 5TH.)

SIR,—Mr. Whitworth's letter in your issue of the 28th inst. has only this day come under my notice. No good purpose would be served by entering on a discussion on a medical subject with a professional colleague in your columns, but I must ask permission to correct an error. The mortality for seven years in six isolation hospitals of the London Asylums Board on nearly 12,000 cases was not 39·3 but 30·3, the last year (1894) shewing a reduction of more than 20 per cent. on the first. The cases, 2,182 in number, treated by anti-toxin in these same hospitals for 1895 gave a decrease of mortality of about one and a half per 100 over that of the former year, viz., 28·1 as against 29·6; but the mortality on 1,347 cases treated without anti-toxin was reduced to 13·4, which also shews a marked contrast not only to the average of 30 for former years, but to the 17 per cent. that Mr. Whitworth claims for anti-toxin, not alone but in conjunction with all the old remedies. It is true that it has been claimed that only the severe cases were treated in these metropolitan hospitals with serum, and the mild without; but, as I have shewn in an article in *The Contemporary Review*, for July of the present year, the contention does not hold good in any case, and more especially cases which occurred in that particular age period, viz., between one and five, when no case of diphtheria can be considered otherwise than most grave, for the mortality was 20 per cent. better without serum in 1895 than it was in like

circumstances in 1894, and 10 per cent. better than it was with serum in the same year. One word more. For reasons that need not be entered into percentage mortality is misleading. But little decrease in the mortality from diphtheria per 10,000 is recorded from any large centre of observation since the introduction of anti-toxin; on the contrary, in some centres it has even been increased.

LENNOX BROWNE.

Mansfield Street, London, W.

SCIENTIFIC FOLLY.

(FROM "THE ECHO," LONDON, NOV. 10TH.)

SIR,—I imagine that most of your readers are convinced that vivisection is diabolically cruel. Many, no doubt, are equally convinced that the practice is worse than useless for any influence on the arts of medicine and surgery. Probably, however, few are aware how dense is the ignorance of the professed physiologist of the practical common-sense aspect of his own science. I, for one, who never credited him with any great amount of knowledge available for the treatment of disease, at least believed that he knew enough physiology to enable him to tell a dead dog from a living one. I should never have been bold enough to aver that this amount of practical physiology was not to be learned in the laboratory. We have been too generous. "There is no fool like a learned one." Behold the latest illustration of the fact. In the well-known medical magazine, *The Practitioner*, for October, 1896, there is an article on "Anæsthesia," by Dr. Frederick Hewitt, Chloroformist to the London Hospital, Charing Cross Hospital, the Dental Hospital, etc., in which he says, "Not long ago I paid a visit to a well-known physiological laboratory. In one of the experiments the question arose whether a particular animal had or had not ceased breathing, and, to my astonishment, I saw that respiration was regarded as proceeding so long as certain feeble and fitful muscular contractions about the chest and abdomen persisted—contractions which were, and for some time had been, utterly unable to cause the slightest ingress or egress of air. This incident shows that what is by some physiologists regarded as respiration is to the anæsthetist nothing of the kind, and that a practical acquaintance with anæsthetizing human beings would materially assist the physiologist in his researches." But if the practice of vivisection does not avail to teach a man whether the animal on which he is experimenting is breathing or not, alive or dead, what does it teach him? You give it up, Sir? So do I.

Yours, etc., EDWARD BERDOE, M.R.C.S.

Tynemouth House, Victoria Park Gate,
London, E., Nov. 7th.

A JUDGE CRITICISED.

(FROM "THE ECHO," LONDON, OCTOBER 7TH.)

SIR,—May I draw attention to a portion of Lord Justice Lindley's remarks in *The Times* of Friday, October 2nd, when about to distribute prizes to the medical students of St. Thomas's Hospital:—"His Lordship spoke at some length as to vivisection, pointing out that those who decried its practice and would shut it out by law were incurring a fearful responsibility. Allowing for all the objections, moral and physical, which were being raised, he was of opinion that if they weighed human life against animal life, the human judgment would favour vivisection for the sake of the human being." We admit that his Lordship did not speak here judiciously, hence might claim some little freedom, but do we not expect an English judge, even in a semi-judicial position, to show the fairness of a true gentleman? Who denies that human life outweighs animal life tenfold? The judge here lowers himself into the crafty advocate by first assuming the very doubtful problem that human life is, or has been, ever saved by vivisection, and next by flattering himself he can at once sweep away "all moral and physical objections";—to indescribable tortures add the fearful moral pollution of our future doctors the young medical students listening to these words. We anti-vivisectionists do accept the "fearful responsibility" of doing our best to abolish such practices. Is there no solemn responsibility resting on teachers, aye, even on judges, who uphold them?—Yours, etc.
October 5th.

A QUIET OBSERVER.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, TUESDAY, DECEMBER 1st, 1896.

THE JUBILEE OF ANÆSTHESIA.

THE medical world has just celebrated the jubilee of the introduction of ether and chloroform into the practice of surgery. It was well to do this. Jubilees and centenaries of much less important events are commemorated daily; to forget the men who brought from heaven the gift of anæsthesia to those under the surgeon's knife would indeed be base ingratitude to science and humanity. "Let us now praise famous men," said the son of SIRACH, "such as found out musical tunes, and recited verses in writing . . . there be some which have no memorial, but these were merciful men . . . their glory shall not be blotted out." If these shall be eternally honoured what shall be said of those merciful men who gave us chloroform and ether? Yet how many of us have ever heard the names even of these benefactors of our race? "Pain is the deepest thing we have in our nature and union through pain has always seemed more real and holy than any other." It is just this "union through pain" which prompted and inspires the great movement in the civilized world for the protection of animals. This jubilee, therefore, has a special interest for us Zoophilists. It was just fifty years on the 16th October last since the first surgical operation was performed under ether by Dr. MORTON, a dentist in the Massachusetts General Hospital, Boston, U.S. Sir JAMES SIMPSON, of Edinburgh, discovered the anæsthetic properties of chloroform in 1847. Tens of thousands of sufferers in the past half century have had reason to bless the names of MORTON and SIMPSON for the two drugs which ensured them quiet sleep while the scalpel and the saw were busy with their limbs and organs.

As in the case of every important discovery so especially in that of anæsthesia men did not arrive all at once at the invention, but came upon it by slow degrees. Medical historians are well acquainted with the fact that in all ages and in all countries some drug or other has been in use to assuage the pangs of operative surgery. The ancients could produce anæsthesia by compression and the use of such drugs as mandragora and belladonna.

GARIOPONTUS, a medical writer, who died before 1056, is the first who describes the inhalation of narcotic vapours for medicinal purposes, although HERODOTUS says that the Scythians used the vapour of hemp seed for purposes of ordinary intoxication by inhalation. Even savages have their modes of inducing unconsciousness under painful operations. The gravest abdominal sections are performed in Central Africa on patients rendered half unconscious by copious draughts of banana wine.

But all such drugging produced effects very inferior to those of the chemical substances prepared in the laboratories for inhalation. PRIESTLY discovered nitrous oxide—the gas so largely used in dentistry—in 1772. Ether was known to all the earliest chemists, and chloroform was discovered by SOUTHAIR in 1831, and independently by LIEBIG in 1832. The chemists found out the drugs, the glory of discovering their uses fell to the men who learned how to employ them in destroying pain.

It concerns our readers very much to know how such revelation came about. It is constantly alleged that experiments on animals had much to do with the matter, and some of our less scrupulous opponents do not hesitate to declare that without such experiments we should have had neither of the great anæsthetics, ether and chloroform. A very large amount of experimental work in connection with the discovery was done on men, the subjects of the experiments being the workers themselves, who again and again exposed themselves to the imminent risk of death in their investigations. The heroism of MORTON, SIMPSON, and SNOW was conspicuous in this respect. Yet some animals were sacrificed, but so far as we can discover, without the slightest necessity or advantage. Sir BENJAMIN WARD RICHARDSON says: "The instauration of general anæsthesia came from experiment made on men alone. There is no suspicion of any experiment on a lower animal in connection with it." It was once stated in the House of Commons that Dr. SIMPSON experimented upon two rabbits with chloroform before employing it on himself. He did; but the rabbits promptly died. If the experimenter had been influenced by this catastrophe he would probably not have taken it himself. As he knew he was not a rabbit he inhaled the drug and made the discovery.

The Hyderabad Commission sacrificed four hundred animals in their experiments with chloroform, with the result that many patients have lost their lives in consequence of the confusion into which the administration of the drug has been thrown by men who contended that what happened to Indian dogs and monkeys will happen to men and women in Europe. For very shame our opponents should hold their tongues about animal experimentation in connection with anæsthetics; as Dr. SNELL said of MORTON's experiments on animals with ether, they had no result "beyond contributing some additions to the long list of dumb martyrs to science." Dr. HEWITT, Anæsthetist to the London Hospital, Charing Cross Hospital, and the Dental Hospital, in an

article in *The Practitioner* for October, 1896, points out that the subject of anæsthesia has suffered considerably, and is still suffering, at the hands of physiologists. The giving of anæsthetics is a practical matter, and it would be wiser if all physiologists learned how to administer chloroform and ether by studying their effect on human beings, than by attempting to teach doctors their business by experimenting on animals in the laboratories. Dr. HEWITT says (p. 353): "They would soon realize the important fact that in anæsthetizing human beings numerous factors come into play which are either not met with at all in the lower animals, or are met with only in a modified degree." He tells a story of an experimenter in a physiological laboratory who thought an animal he was cutting into was breathing because certain feeble and fitful muscular contractions of the chest persisted, whereas the animal had been dead for some minutes. He adds: "This incident shows that what is by some physiologists regarded as respiration, is to the anæsthetist nothing of the kind."

It is sad to reflect that the age which has delivered itself from the reproach of inflicting surgical agonies for the benefit of human beings, is precisely the period when the torture of animals for scientific purposes has been carried to the utmost extent. We are clothed with such a network of sensitiveness that our pain is always in proportion to our perfection, yet this sensitive age is precisely that which demands an ever-increasing amount of animal suffering to palliate its own sensitiveness. Rather should our successful efforts to assuage the sufferings of ourselves and our kind lead us to pity and rescue creatures formed very much as we are, and capable of agonies which we vainly attempt to minimize when we give ourselves the trouble to think of them at all.

CLERGYMAN, NATURALIST, AND ANTI-VIVISECTIONIST.*

THE late Rev. F. O. MORRIS, of Nunburnholme, will long be held in grateful remembrance for his works as a skilled and scholarly naturalist on "British Birds" and "British Butterflies," which are standard books on the subject, and are likely to remain so. To lovers of animals and those who bear a part in the various movements of the time designed to protect them from cruelty, his name will ever be as a sweet aroma, because he fought his hardest against not only the thoughtless cruelties of the miscellaneous gunner on the seacoast, but above all, against the exquisite and excruciating tortures perpetrated in the laboratory in the name of science. We had the pleasure of seeing him, when, in 1890, during the Congress of the British Association in Leeds, he took the chair at a lecture given on the Pasteurian delusion, by Dr. BERDOE. We also had frequent correspondence with him in the years which intervened prior to his death, and should say that the

* "*Francis Orpen Morris: A Memoir.*" By his son, the Rev. M. C. F. Morris, B.C.L., M.A., Rector of Nunburnholme, Yorkshire. With portrait and illustrations. London: John T. Nimmo, 14, King William Street, Strand, 1896.

estimate of his character on page 20 of this attractive volume is essentially accurate in affirming that he was the man "to stand up for what he believed to be right, no matter what powers were arrayed against him; to protect the weak against those who cruelly oppressed them; to expose that which was false, and, if possible, bring it to nought." At the age of fourteen, we are told, his mind was imbued with "the religious principles which were the guide and rule of his whole life," and we can quite believe it. The late Mr. MORRIS was always busy—in his parish, with his pursuits as a naturalist, or with the controversies he carried on against cruelty and other wrongs. In regard to his "History of British Birds," his biographer writes:—

"From time to time, in the course of writing their history, he could not forbear giving vent to his feelings against those who would persecute and wantonly destroy these happy feathered creatures in all their natural beauty. A more determined and formal crusade against bird murder was vigorously carried on by him in later years, to which allusion will be presently made; but it is not without interest to notice in passing with what fervour and feeling he now and again defends his friends against their enemies in the pages of the 'History of British Birds.'"

The manner of man he was may be more fully judged from the following:—

"Possessed of an active body, and a no less vigorous mind, his great aim through life was to employ them in the service of his Master, in doing what good he could in the world during his short stay in it, and each morning as it came filled him with the desire to make the most of its precious hours. In point of physique he seemed marked out for an active life. Of medium height, and of spare, wiry, and upright form, he looked like one who could do a good day's march without fatigue. To many he appeared to have not a little of the strict officer about him; and, indeed, those who so judged, judged rightly. Still, beneath a somewhat reserved manner, that at times made itself felt, there was ever beating the kindest of hearts. Although striving as much as lay in him to live peaceably with all men, he was the last man in the world to have, or to wish for, peace at any price. He looked upon fighting in a good and righteous cause as a solemn duty, and when once he was convinced that the position he took up was worth contending for, he would never give it up. If at times the weapons he used were thought by some to be too sharply pointed, he would justify his words by the circumstances of the case; and he seldom saw fit to modify the language he used in attacking any evil, of the wrongness of which he was thoroughly convinced. His methods naturally raised up many adversaries against him, which he for the most part looked upon as a good sign; as he said in one of his letters, he regarded it as an honour to be abused by certain people. 'Woe unto you when all men speak well of you,' was a warning of which he for one most fully felt the force. He had a keen insight into character, and was quick, as we say in Yorkshire, in 'reckoning a man up.'"

As would be expected, his interest in and care for creatures in distress never left him for a moment:—

"In taking these rounds no weather stopped him, and, until his latter years, it was with difficulty that he was induced to wear a great coat or carry an umbrella with him. During these walks he kept his eyes about him, and any creature, whether bird or beast or creeping thing, in distress or suffering, that came before his notice found in him a ready friend and helper. It almost seemed, not that he would not, but that he could not, pass by a suffering creature of any kind without at least attempting to better its case."

Of course, what interests us most in this biography is the record of Mr. MORRIS's determined opposition to vivisection, as to which the author writes:—

"Certain it is that, of all the forms of cruelty against which he carried on such a long and determined crusade, there was

none which he held in greater loathing and abhorrence, none which, in his conviction, was fraught with more dire consequences, than that which is involved in the term vivisection. It would be impossible to describe his feelings with regard to this practice; no words seemed strong enough to express what he thought about it, and therefore no trouble was too great for him to take in his endeavour to influence public opinion against it. He looked upon it as something infinitely worse than any ordinary cruelty; in fact, there was nothing else to which it could be compared. How could it possibly be otherwise with him? Towards every animal he had a kindly feeling; nothing was beneath his notice; for him everything had its place in the world, each its use, however humble and obscure; all were God's creatures, all wonderful, all to be loved and cared for. To be in any way a party to the torturing and experimenting upon any one of these was in his eyes to descend to the lowest depths of degradation and cruelty. Rather would he have died a hundred deaths than have had his life prolonged, if such a thing were possible, by any discovery that might be made through the abominations of the vivisection-room."

How hard and intensely he fought the question against the scientific torturers of animals the following will show:—

"Among the many columns, not to say pages, that he penned to the public journals on this harrowing question was a series of contributions to one of the London papers which he styled 'Collectanea for a Bill of Indictment at the Bar of Public Opinion against the Perpetrators of Experiments on Living Animals.' In these he quoted the opinions of many eminent men upon the subject, together with his own views, which he expressed in feeling terms. To plead for the weak against the strong was in this connection a religious duty, from which nothing could make him swerve. Said he at the outset:—'I have heard a voice from above to everyone that will hear it—"Open thy mouth for the dumb;" and it is a voice of the Great Judge—of Him who has said for all such crimes, "Shall I not visit for these things?" Yes; but would that the plaintiffs in this case would speak and plead for themselves! Could they but do so, their heart-rending cries would be heard in such a loud and bitter complaint as would echo up against the very vault of heaven, a complaint of sufferings neither the amount nor the intensity of which can be told by any but themselves. If they could be written down against those who have so vilely sinned against them, they would compose such a volume as the world has never yet seen.' . . . Most earnestly and eloquently did he plead the Cause of the animals who could not speak for themselves. Hear him:—'As for you, poor dumb creatures of the hand of God, who only by reason of your want of speech are unable to tell the sad and harrowing tale of your own most grievous, most lamentable, bitter, and heart-rending sufferings, heartily, and on my knees, and with tears in my eyes I have prayed to Him, who saved both man and beast, that he would for the sake of One by whom you, as well as I were made—and so "fearfully and wonderfully made"—that he would give a force and a power to my humble words in your behalf which they could never otherwise have of themselves.'"

It is always pleasant when we find friends of our Cause in active communication, on the principle that "Union is strength," and we are particularly glad to learn that Mr. MORRIS got in touch with Ex-Professor RUSKIN, whose reference to the anti-vivisection cause as "our side," in the following extract—the last we must make—is especially interesting:—

"As already mentioned, he gave a very plain and decided expression of his views generally on this question in a sermon he preached in York Minster in 1886. Well knowing the opinions of Mr. Ruskin with regard to the practice of vivisection, it naturally enough occurred to my father to send him a copy of this sermon, and in acknowledging the receipt of it, Mr. Ruskin wrote:—"I am deeply grateful for your sermon. Far the strongest and clearest bit of writing I have seen on our side, and it gives me much comfort and help in my own

immediate work. I have read it to the end, and may have something to write on it, but can't to-day."

"For Mr. Ruskin's noble conduct in resigning his professorship at Oxford rather than continue to hold any public office in a University that had thought fit to endow vivisection, Mr. Morris had a profound admiration; though in one of Mr. Ruskin's transparent honesty, tenderness, and courage, the course which he took on that memorable occasion could scarcely have come as a surprise to those who had any knowledge of the man."

In the late Mr. MORRIS "our side" lost a valiant, intelligent, and unrelenting supporter, and we have little doubt that the defenders of vivisection in the great county of York, and over a wide area outside of it, had a wholesome awe of his attacks. The more we know of him, the more we regret that he is no longer there to champion our cause. From what we have said above, it will be gathered that Mr. MORRIS was far from being a one-idea man. His sympathies and interests were wide and numerous, and the story of his life makes pleasant reading, and shows what an energetic parish parson may do if he be inclined towards leaving the world better than he found it.

NEW BOOKS, REPORTS, ETC.

Beyond the Pale: An Appeal on Behalf of the Victims of Vivisection. By Mona Caird. London: William Reeves, 185, Fleet Street. (6d., cloth 1s.)

It is good that we should have a popular writer in other walks of literature working on our side, and compiling and publishing a work like this. Mrs. Caird does not profess to have collected or to put forth new facts, but simply to have arranged existing ones in a new way and to have published them in a popularized style. As she observes:—

"The present controversy as to whether or not torture is inflicted is truly ludicrous, seeing that numberless volumes of evidence are extant, written by the physiologists themselves, wherein the contentions of their opponents are proved, and proved again. Indeed, the evidence of the operators in these terrible experiments on living creatures is practically the sole evidence that exists on the subject. Yet so truly ironical is Fate that this is the evidence that pro-vivisectionists deny with so much anger and scorn!"

Then, in the following seventy pages or so, Mrs. Caird proceeds to exemplify this thesis by adducing evidence and arguing upon it until she makes out a very strong case. The book will be eminently useful to all our friends in the work of promoting the Cause. They can place it in the hands of any who will read it, feeling sure that in itself it contains all the materials for impressing the mind and capturing the conviction of those who are not case-hardened against an appeal for mercy intelligently made to their mind, heart, and understanding.

We have received further issues of the *Animal Life Readers* (Bell and Sons), the two now to hand being designed for Standard VII. of the Elementary Schools. The one is entitled *Poor Blossom: The Story of a Horse*, and the other *Ages Ago: The Ancestry of Animals*, and is by Miss Edith Carrington, whose works are so well-written and well-read in these days of extended interest in the habits and fate of animals. Both books are deeply interesting, full of information and laudable sentiments in regard to animals. Both are well-illustrated and desirable manuals for the uses for which they have been so well designed.

SETTING RIGHT A CHESTER CURATE.

Sunday, the 11th of October, was "Hospital Sunday" at Chester, and the Rev. F. A. Scrceton, curate of St. John the Baptist in that city, took advantage of the occasion to preach from the pulpit a pro-vivisection sermon. The substance of

the sermon having been reproduced in the *Chester Chronicle*, the following letters were addressed to and published in the same journal:—

TO THE EDITOR OF THE "CHRONICLE."

SIR,—In your report of Mr. Screeton's sermon on Hospital Sunday I see that he asked in connection with the subject of vivisection, "Are these experiments necessary for alleviation of human pain?" I answer "No!" The late Sir Charles Bell said, "Experiments have never been the means of discovery; and a survey of what has been attempted of late years in physiology, will prove that the opening of living animals has been done more to perpetuate error than to confirm the first views taken from the study of anatomy and natural motions." Sir Andrew Clark said, "For whatever purpose they may be employed, however carefully they may be designed and executed, however successful may be the precautions taken to exclude error, experiments have their subtle difficulties and dangers, which are perilous to truth and cannot be wholly averted." I could fill many columns of your paper by extracts from the works of our most famous physicians and surgeons to the same effect, men who are neither sentimentalists nor governed only by their emotions, but I fear to trespass on your space at greater length on this head.

Mr. Screeton asks, "Which is most to be considered, the health of human beings or animal life?" Robert Browning did not think he would be justified in cutting up no end of living things just to save his corns from shooting, nor can I concede that man may torture by the scalpel, the battery, poisons, fire, and boiling water, the good creatures of God, merely to settle or rather to pretend to settle some obscure point in physiology or pathology. Mr. Screeton is of a different opinion. He is neither sentimental nor emotional. I believe that "Emotion" is the atmosphere in which thought is steeped, that which lends to thought its tone or temperature, that to which thought is often indebted for half its power.

I should be sorry to lose my emotional faculties, but they are to be guided by reason, and if Mr. Screeton knows anything of the men and women who have fought or are fighting the battle of the animals against scientific cruelty in high places he knows well that Lord Shaftesbury, Lord Tennyson, Lord Coleridge, Robert Browning, Cardinal Manning, and Miss Cobbe fought this battle of mercy not by appealing only to the emotions, but by addressing cogent arguments to the reason of their hearers. The reverend vivisectionist or apologist of vivisection said, "If a celebrated Frenchman discovered a cure for hydrophobia by vivisectioning rabbits." "If" indeed! There is great virtue in "if" said Shakespeare, and in the face of the table of the several hundreds of persons dead from hydrophobia after having been "cured" of it by Pasteur we require a very tall "if" indeed in speaking of his prophylactic.—I am, sir, yours, &c.

EDWARD BERDOE, M.R.C.S.

London, Oct. 27th.

TO THE EDITOR OF THE "CHRONICLE."

SIR,—I was gratified to see that the Rev. F. A. Screeton, in the address which you reported in your issue of the 17th, deprecated the attempt to settle the question of the vivisection of animals by "frothy declamation and emotional appeals to sentiment"; but I confess I was surprised that a gentleman evidently inclined to be so matter of fact should earlier on have said that "it was as great a crime to come home out of the wet and sit in wet boots as to omit any distinctly religious duty." I do not know whether this was a bit of declamation—I omit the adjective advisedly, as it might seem disrespectful, applied to a clergyman—or an appeal to sentiment; but I venture seriously to invite its author to prove that it was related to common sense. To partake of the Communion, the holiest rite, as I understand, of the Church, would, I take it, be inculcated as "a distinctly religious duty"; but surely an irreligious man would hesitate to set the necessity of taking off wet boots on a par with it. I have read and heard before of warnings to people in congregations and meetings, not to be led away by appeals to sentiment. But, sir, to what, and what only, must the preacher and teacher of religion always appeal? Religion is not an entity, a tangible thing; it is a sentiment of the mind, the brain, the heart. It manifests itself in certain acts and things; but in its essence

it is and must always remain a sentiment of the soul. Let then the preacher exercise a little thoughtfulness and sobriety before he speaks in a tone or a sense which implies that sentiment is a thing to be condemned.

Pity, compassion, humanitarianism, are sentiments of the mind, and very laudable sentiments too; in saying which I have the people of England at my back, for out of pity and compassion they have by their Legislature enacted laws enforcing humanity to animals who are placed under the dominion of man and cannot defend themselves. It is needless to point out that not a day passes but some unthinking or cruel person finds the law enforced against him for the offence of cruelty to animals. Even in regard to vivisection a law has been passed, and no doubt in consonance with public opinion, making the infliction of pain an offence punishable by heavy penalties, and it is only by the express license and certificate of the Home Secretary that it can be done at all. Thus the whole people of the United Kingdom are involved in the sentimental act—the rightly sentimental act—of endeavouring to protect the dumb creatures of God from torture and abuse.

Mr. Screeton, when he came to matters of fact, seemed to rest the whole case for vivisection upon a single instance; and upon that instance he was inaccurately informed. He said: "If a celebrated Frenchman discovered a cure for such a malignant disease as hydrophobia by vivisectioning rabbits, that experiment at least would leave us in no doubt about its being justifiable."

Now, M. Pasteur, who is here referred to, never claimed to "cure" hydrophobia. If a patient in his care developed the malignant disease, he immediately sent him to one of the ordinary hospitals—to die. But should Mr. Screeton have meant "prevent" instead of cure, M. Pasteur's system has not proved preventive, as some of his patients, so certified by French medical men, have died of the inoculations, and in all 313 persons preventively inoculated are known to have lost their lives.

Therefore the question "Is it justifiable?" which is the crux of the whole controversy, is not satisfied by the case cited. It is necessary to show that vivisection can be justified on moral grounds. To instance an alleged beneficial discovery is only to plead that the end justifies the means, which, I take it, is hardly a Church of England religious plea. At any rate there are several members of the bench of bishops who hold that it is not, and it is for Mr. Screeton to show that these reverend fathers are in error. It does not matter, I submit, with what intention the practice of vivisection is carried on—not even if it be "the direct, pure intention to arrest the march of disease in man"—as the process of vivisection is of itself morally unjustifiable.

The speaker referred to was indeed inconsistent with himself in his arguments. He remarked early in his address that human pain and suffering were traceable to "the hurry and turmoil which characterized our modern life, to pushing competition, to hereditary influences, and often to a careless disregard of health." Can vivisection remedy these things? Surely not. It is rather for the preacher, the religious guide, to lead the people to avoid these things as far as possible. No doubt he finds it a hard task to do so. And so he takes—I disclaim all idea of disrespect—a short cut, as he thinks, and as the vivisectioner attempts to do, to gain remedies for the ills of the human race.

That the vivisectioner's attempt will fail is certain. What blessing can he expect to rest on the search for knowledge at the cost of enormous suffering to the defenceless creatures which have been placed in the world by the same Maker as created himself? What reliable evidence can he expect to wring from the bodies of animals whose whole structure is disrupted, mutilated, and agonised with pain? Or if chloroform be used, how can he expect the evidence of truth when the creature's system is permeated and poisoned by the drug?

Sir, it is the fact that the best doctor is he who has had most experience with the ailments of the human being. When the vivisectioner has tried his experiments on animals, he is still in doubt as to what would happen in like circumstances in mankind: and many instances are on record where the doubt has been sought to be solved by direct experiments. Moreover, the scientific experimenter, though brought up to the

medical profession, frequently becomes unfitted for practice because he is converted into a scientist and nothing more.

I venture to submit that the nation having by its legislation pronounced against cruelty to animals, it is established that the national genius is in favour of a humanitarian policy all round, and that whoever desires to act as a guide to lead the people to better things religiously or socially will only be likely to succeed if he acts in accordance with that genius and that policy.—I am, sir, your obedient servant,

BENJN. BRYAN.

Sec. Society for the Protection of Animals from Vivisection
20, Victoria Street, London, s.w.
October 26th, 1896.

HOME INTELLIGENCE.

LONDON.

MEETING IN BELGRAVIA.

On Thursday, November 14th, on the invitation of Mrs. S. M. Benson, member of the Victoria Street Society's Committee, a numerous company assembled at the studios of the late Mr. Ward, the sculptor, in Gerald Road, Eaton Square, to hear addresses from Miss Alison Garland and Mr. Leadbeater. Mr. R. S. Wood took the chair, and was supported by Dr. Berdoo, Dr. A. A. Beale, Mrs. Mallet, Miss O. S. Bryant, Colonel Benson, Mr. B. Bryan, and others. The Chairman having opened the meeting, Miss Garland rose and delivered an address condemning vivisection on the ground of its cruelty, its uselessness, and especially its unjustifiability from the ethical point of view.—Mr. Leadbeater spoke at length, laying it down that man had no right to inflict pain on an animal except for its good.—Surgeon-Major Hayes supported the practice of vivisection, saying that it was a system of "fair give and take." He asked if the sensitive plant was not to be touched, because of its shrinking; condemned birds on hats; and instanced Sir Spencer Wells's experiments in regard to ovariectomy as a gain from vivisection.—Dr. Berdoo pointed out that the operation of ovariectomy was known and done long before Sir S. Wells attempted it.—Mr. Bryan took exception to the statement that vivisection was anything like "fair give and take." On the contrary, there was no fairness in it.—The services of the principal speakers were acknowledged, and the company, at Mrs. Benson's invitation, partook of tea before leaving.

WIMBLEDON.

On the invitation of Mr. R. S. Wood, a drawing-room meeting was held at Brantwood, Worple Road, Wimbledon, on the 14th ult., Mr. Beatty in the chair. Mr. Wood moved "That vivisection is scientifically unnecessary and morally unjustifiable." He denied that utility was the real aim of vivisection; urged that the alleged beneficial results of the practice would not stand investigation; that if it were beneficial it was cruel, and therefore wrong; and that so far from vivisection doing good it did positive harm to men's souls and bodies.—Dr. Berdoo, in an able address, supported Mr. Wood's contentions.—The motion was opposed by the hostess, Miss Noble and others, and supported by Mr. Trist. In the result it was carried with but few dissentients, there being some sixty persons present in the meeting.

SOUTH PLACE, FINSBURY.

On November 17th a discussion was opened at the South Place Institute by Mr. Ernest Bell, who was supported by Dr. Berdoo. From the prestige of the Institute it was hoped that a useful debate would have followed, but the meeting was a very small one, ten members only being present. Dr. Alice Vickery, who spoke in opposition, based her remarks on the ethical part of the question on the theory of "the greatest happiness of the greatest number," apparently overlooking the fact that to place the animals altogether outside the number whose happiness is to be worthy of consideration is simply to beg the whole question at issue. Bentham and Mill, the great leaders of the utilitarian movement, had advanced a good deal beyond this point; but apparently at South Place

the intimate relationship between man and the other animals is not yet fully realized. Dr. Vickery's scientific argument based on the necessity for testing drugs on animals was no happier, especially in the presence of the author of *The Futility of Experiments with Drugs on Animals*, and Dr. Berdoo soon produced overwhelming evidence of the misleading nature of such methods. Dr. Drysdale, who spoke at some length from the chair, had apparently never conceived the possibility of there being two sides to the question and seemed content to rely on authority. He was hardly more fortunate than the other speakers in selecting for special eulogy the Pasteurian claims and the antitoxin treatment. Mr. Bell, who, as our readers know, has specially gone into the statistical side of the question, had no difficulty, and we doubt not had much pleasure, in dissipating the extravagant and palpably absurd claims which the profession so sedulously (and ignorantly, we admit) continue to circulate about Pasteur and his treatment. No vote was taken.

MANCHESTER.

A meeting was held of the St. George's Mutual Improvement Society, Apollo Street, Oldham Road, on Friday, October 30th, when Mr. Sugden gave an address. The Rev. C. C. Frost, M.A., presided. There was a good attendance, and a very interesting debate, which was opened by the Rev. G. J. Ash, took place. Mr. Sugden promptly and effectually answered the questions and criticisms raised. Literature was distributed during the proceedings.

LECTURES BY MR. B. SUGDEN.

Mr. Sugden delivered a lecture at a meeting of the Mutual Improvement Society connected with the Congregational Chapel, Oldham Road, on October 23rd. The Rev. W. H. Towers was in the chair. From first to last the greatest interest was shown, and the following resolution, after discussion, passed unanimously:—"That the practice of vivisection being utterly at variance with every moral code which acknowledges the duty of mercy and justice to the weak and helpless, the most earnest efforts should be made by the friends of the lower animals to secure its total prohibition by law."

A meeting of the Mutual Improvement Society connected with the Congregational Church, Greenhill Street, Greenheys, was held on November 2nd, when Mr. Benj. Sugden gave an address. There was a good attendance, and it was a good and interesting meeting.—The Rev. J. Ferguson, B.A., B.D., presided.

FRIENDS' ANTI-VIVISECTION ASSOCIATION.

The annual meeting, which was of a social character, was held at the Friends' Institute, Mount Street, on Friday, October 23rd, when Mrs. Maria Richardson, of York, gave an interesting address. Mr. Gilbert J. Fowler, M.Sc., presided, and Mr. J. W. Graham, M.A., of the Dalton Hall, and others spoke.

MEETING AT GORTON.

Mrs. Herbert Philips read a paper at a meeting of the Gorton Women's Liberal Association, in the Congregational Schoolroom, Church Lane, Hyde Road, on Monday, October 26th. Councillor Wainwright was in the chair. The meeting was deeply interesting and successful.

DERBY.

MR. T. A. WILLIAMS'S TOUR.

Mr. T. A. Williams completed a two month's lecturing tour on behalf of the Society in some of the great northern and midland towns on the 6th of November, at Derby, where he had spent a fortnight. During his stay he lectured repeatedly in the market place, also addressing large numbers of the men employed at the Midland Railway Works, and at all the centres in and around Derby where open-air meetings are usually held. He also spoke at the Gospel Hall upon three occasions to different audiences. He moreover addressed the P.S.A. of the Congregational Chapel, Ashbourne Road, and also lectured to the Derby Secular Society.

Mr. Williams's last lecture at Derby was held in the Congregational Schoolroom, London Road, on Wednesday

evening, November 5th. The chair was occupied by the Rev. J. Pandey Williams. The title of the lecture was, "Vivisection of Animals: Cruel, Useless, and Dangerous to Hospital Patients," and in the course of a very interesting and instructive lecture, says the *Derby Daily Telegraph*, Mr. Williams explained what vivisection consisted of. He also gave the names of a number of well-known surgeons who were opposed to vivisection, and added that all he wanted was mercy and justice for animals. He concluded his lecture by showing a number of lantern slides illustrative of vivisection, and asked those present to assist in suppressing it.—Mr. Councillor Peach proposed a resolution to the effect "That this meeting expresses its detestation of all forms of cruelty, desires to record the fact that high medical authorities are of opinion that the practice of vivisection is not essential to the progress of medicine, and pledges itself to work for the prohibition of vivisection."—The resolution having been seconded, Dr. Barwise, Medical Officer of Health for the county, proposed an amendment to the effect that the meeting was against cruelty to animals, but that the Act of 1876 for the prevention of cruelty to animals had made such safeguards that vivisection could not be made an abuse.—In the end the resolution was carried by a large majority, and a vote of thanks to the Chairman brought the meeting to a close.

READING.

THE LOCAL BRANCH'S MEETING.

The Reading and District Branch of the Victoria Street and International Society, held a public meeting in the Town Hall, on Friday evening, October 30th.

DR. ARTHUR A. BEALE, of Clapham, presided, and in his opening speech presented the medical side of the argument against Vivisection, and shewed the futility of researches carried on by this method.—A long and able address was then delivered by MRS. CHAS. MALLET, of London. She described the growth of this abominable system, and shewed how false was the contention that there was little or no suffering involved, by describing some of the experiments. The relief afforded by anæsthetics was often slight and transient, and the check on cruelty imposed by occasional visits of Inspectors, and returns made by the interested parties, was absurdly ineffective. It was not the medical faculty who were the real supporters of Vivisection; it was the physiologists, who pursued the practice for the sake of knowledge. But the hardening and deadening of all our finer sensibilities which must be the effect of knowledge so gained was too great a price to pay for it. Mrs. Mallet's stirring arguments called out frequent applause from the audience.—The REV. T. PERKINS, M.A., F.R.A.S., Rector of Turnworth, Blandford, spoke especially on the moral aspects of the question, pointing out the terrible spiritual loss which a man inflicted on himself when he wilfully destroyed his own feelings of mercy and pity. A resolution, supported by an apparently unanimous show of hands, was passed for the total suppression of Vivisection as cruel, useless, and tending to Hospital experimentation.—The REV. J. STRATTON, in an earnest and enthusiastic speech, called on the audience to support the work of suppression by joining the Reading Branch, and the meeting closed after some discussion, one member of the audience raising objections, which were replied to by Mrs. Mallet and Dr. Beale.

WESTON-SUPER-MARE.

A meeting, under the auspices of the Weston-super-Mare Anti-Vivisection Society, was held in the Lecture Room of the Y.M.C.A. on Monday evening, Oct. 26th. The chair was taken by the Rev. C. H. Clark. In opening the meeting the CHAIRMAN said he sometimes regretted the half-foreign nature of vivisection as in some degree disguising the practice, and thought the "Society to Prevent the Dissection of Living Animals" would convey more forcibly its cruel nature. They were told that the object of vivisection experiments was the alleviation of human pain, but those who were honest admitted that their motive was scientific curiosity. He could not see how the baking of dogs alive in order to see how long they would be dying at a particular temperature, tended to alleviate human suffering. They had abolished cock-fighting,

and looked with horror on Spanish bull-fights, or a Tartar cutting a steak from a living animal; yet such suffering was slight in comparison with the cruelties perpetrated in the name of science.—Mr. BEAVEN CLARK proposed the resolution, "That in the opinion of this meeting vivisection is morally indefensible, and scientifically misleading, and should be prohibited by Act of Parliament."—Mr. M. L. JOHNSON, who explained his remarks with a diagram of the brain, seconded the resolution. Though some physiologists, he said, claimed that their science, which concerned itself with discovering the purposes and uses of the different organs of the body, could only be advanced by means of vivisection, the results of the efforts to discover function by such means were found, when impartially examined, to be very meagre. Both on the authority of men whose discoveries in physiology had entitled them to a foremost place in the files of time, and on that of unprejudiced reason, it was a useless and misleading method of research. Such methods of questioning Nature as those employed by Professor Ferrier, who threw the brains of chloroformed animals into spasmodic convulsions by electric stimulation, could never reveal the functions of an organ so inconceivably complex and exquisitely delicate in structure. It had been claimed by Ferrier that he had elucidated the functions of the cerebellum, and that it controlled the movements of the eye-ball. Yet in an up-to-date manual of physiology based on vivisection, the old and exploded notion of Majendie that it co-ordinated muscular motion, was still asserted, and the control of the eye-ball attributed to quite another part of the brain.—Mr. H. WOLSTENHOLME supported the resolution. To justify the torture of animals would be to justify that of men. Evils and cruelties had frequently been perpetrated in the name of God.—Mr. BAKER proposed that the resolution be forwarded to the member of Parliament for the Wells Division of Somerset.—This resolution on being put to the meeting was carried unanimously.

ADDRESSES BY MISS A. GARLAND.

A drawing-room meeting at the house of Miss Welsh, of Sunnyside, Somerton, Somerset, on Tuesday afternoon, October 27th, was addressed by Miss Alison Garland, of Plymouth, who had accepted a temporary engagement from the Victoria Street Society, on anti-vivisection. Mrs. Warner, of Long Sutton, presided. Miss Garland, in her address, dealt with the history of the anti-vivisection movement and the pleas put forward by the scientific men who support physiological research. She maintained that what was morally wrong could not be scientifically right; that cruelty itself was wrong, and that the motive for deliberately inflicting it could not justify the sin itself. Miss Welsh proposed, and Mr. S. A. Worner seconded, a resolution protesting against vivisection, which was carried.

On the evening of the same day, Miss Garland addressed a meeting held in the Temperance Hall, Long Sutton, Somerset. Miss Garland addressed herself to the subject of the cruel tortures practised upon thousands of animals annually in the supposed interests of science, and urged upon her hearers the importance of advocating the principles of mercy and justice towards the poor dumb creatures whom God has given to man, so faithfully to serve and help him. She also showed from the testimony of doctors and physiologists themselves that vivisection had proved almost entirely useless in its professed aim at alleviating human suffering, and pointed out that if as much time and care were given by scientific men to the laws of sanitation to prevent disease, in the way of securing proper drainage, ventilation, water supply, wholesome food, etc., it would do more good than vivisection could ever effect. Mr. H. Bennett was in the chair, and a resolution was adopted to be forwarded to the Home Secretary.

On Friday night, October 30th, Miss Garland spoke at a meeting held in the Friends' Meeting House, Bridgwater. Mr. Lewis Thompson presided. Miss Garland gave an account of the scientific research of the present time, and showed how largely vivisection was the means used for this purpose by physiologists. She described some of the awful torture to which animals were subjected without anæsthetics in the laboratories of Great Britain, and then asked was it necessary, and was it right? Having quoted authoritative medical

opinions to show that it was neither, she said that after all the soul was of more value than the body, and it was of infinitely more importance that mercy and humanity should prevail than that even diseases should be cured at the cost of selfishness and cruelty. In a discussion that followed, Dr. Pope said he did not advocate entirely vivisection as it was carried on in the present day. There were doubtless cruel and brutal experiments that were wholly unnecessary, but he should be sorry to put it down altogether, as he believed good had come of the system. Miss Garland asked him where he would draw the line? A hearty vote of thanks was accorded to the lecturer for her address.

SCOTTISH SOCIETY.

MEETINGS IN EDINBURGH.

On Tuesday, November the 10th, a meeting was held at the residence of Mrs. Davidson, Manor Place. The Rev. J. Baird presided, and there was a good attendance. The Chairman delivered an address, referring to the New Laboratory in Bristo Place, and also to the plans just issued for the Edinburgh Fever Hospital, and stated that it was satisfactory to know that the efforts of the Society in connection with them had been to a large extent successful. He then referred to the Buda Pesth Conference and the successful vote obtained there, in favour of action in regard to vivisection. The Deputation to the Home Secretary as to the Institute for Preventive Medicine and the opening address of Sir Joseph Lister in connection with the British Association Meeting at Liverpool, gave indications of progress.

The first prayer meeting for the season was held in the Bible Society's Rooms, 5, St. Andrew's Square, on Tuesday, the 17th ult., when there was a good attendance, the Rev. William Allan, M.A. presiding. It has been arranged to hold a prayer meeting in the same place and at the same hour on the third Tuesday of each month during the winter and spring months.

MEETINGS IN GLASGOW.

The opening prayer meeting for the season was held in the Protestant Alliance Rooms, 12, Argyll Arcade, on Tuesday, November 10th, Mr. H. A. Long, presiding. It has been arranged to hold a prayer meeting in the same place and the same hour on the second Tuesday of each month during the winter and spring months.

A Meeting was held at 8, Oxford Drive, Glasgow, on Thursday, the 19th ult. The Rev. Professor McLellan presided, and there was a large attendance. The Rev. John Baird delivered a very stirring address on "The Recent Successes of the Anti-vivisection Movement." Mr. H. A. Long and Col. Waterston also took part in the meeting.

THE MEMORIAL AGAINST THE CHELSEA INSTITUTE.

The Scottish Society has been able to secure between two and three thousand signatures to the memorial to the Home Secretary, against the Chelsea Institute, among them being leading and influential citizens from all parts of Scotland.

FOREIGN INTELLIGENCE.

GERMANY.

VIVISECTION EXPERIMENTS.

The *Thier- und Menschenfreund* publishes the following from the *Centralblatt für Allgem. Pathologie*, April 30th, 1895:—

"The production (by experiment) of amyloid degeneration in animals. As suppuration is the chief cause of amyloid degeneration in man, Dr. N. P. Krowkow (Krovkoff) of St. Petersburg, tried to produce the complaint in rabbits and fowls, by means of subcutaneous injections of staphylococcus. The rabbits were soon affected and died within from six to eight weeks. Traces of amyloid degeneration were found in eight out of twelve rabbits. No traces, however, could be found in the fowls. Experiments were afterwards made upon dogs, but they remained free from the disease, although they were tortured for from two to three weeks, with injections." We are not told whether the Vivisectionists will be guided, in dealing with man, by the results of their experiments on rabbits, or by

the results of their experiments on dogs and fowls; or whether they will see, what is clear to all the world beside, that such different results make it useless to argue not only from animal to animal, but also, and this the important point, from animal to man.

The following extract is from the *Centralblatt* of March 30, 1895:—

"A demonstrative experiment with reference to the pathology of the kidneys. By Dr. Xaver Francotte. In this way I consider it possible, and I have practised it for several years, to fix the attention on that which concerns the secretion of urine, uniting, as it does, all the desired conditions. The experiment is carried out on dogs of a suitable size, that is from eleven to fifteen pounds in weight. A short time before the lecture, the dog is drugged with morphia, otherwise it might prove intractable during the operation. A cannula is introduced into each ureter, the end of a syringe is made fast in the *jugularis externa*, and one *nervus vagus* laid bare. The diuresis is usually very slow. This, however, is not a disadvantage; on the contrary, it allows the contrast (with that which follows after) to be more fully marked. When the students thoroughly comprehend all the conditions of the diuresis, a warm, concentrated solution of sugar and water, consisting of not less than an ounce of each, is injected into the *jugularis* causing the diuresis to be very much accelerated. The central end of *nervus vagus* is now placed in contact with a strong faradic current of electricity, with the result that the diuresis is almost immediately checked, if not stopped altogether. Upon disconnecting the electric current, the diuresis begins or increases, and the connecting and disconnecting of the current can be repeated again and again, until all the students present have had a full opportunity of seeing this part of the experiment."

And by and by the poor dog has a fearful awakening, unless that occurs while the students are still trying to comprehend what possible connection there can be between a faradic current so applied, and the natural functions of the body.

UNITED STATES.

INCREASED DIPHTHERIA MORTALITY IN PHILADELPHIA.

In the Bureau of Vital Statistics published for the year 1895 in Philadelphia, the report says: "The number of cases of diphtheria in the city has been 3,423 with 1,247 deaths, as compared with 3,159 cases and 1,047 deaths in the year previous, and this notwithstanding the employment of the anti-diphtheritic serum by a very considerable proportion of physicians. Up to the present time, statistics appear strongly confirmatory of the value of this agent." We do not consider this report as proving much for the anti-toxin treatment, nor in this case do the statistics appear "strongly confirmatory of the value of this agent."—*The Journal of Zoophily* (November).

BOMBAY.

THE PROPOSED PASTEUR INSTITUTE.

NEW ANTI-VIVISECTION SOCIETY FORMED.

We have received with much pleasure the information that a public meeting of the Hindoos was held at Bombay, on the 18th of October, to protest against the establishment of the proposed Pasteur Institute in India. At the same time it was resolved to found a Society under the name of "The Indian Anti-vivisection Society" for the suppression and prohibition of the practice of Vivisection. A fund was forthwith started for the support of the work, and about Rs. 3,000 were subscribed in the room in some twenty minutes' time. The first step proposed to be taken is to agitate throughout the Indian Empire, and then to send an enormous petition to the Government. On receipt of this good news, the Committee at Victoria Street at once tendered their hearty congratulations, and voted a large parcel of literature as a gift to the new Branch. The Hon. Secretary is Mr. Mansookhlal R. Mehla and the Office of the new Society at No. 566, Pydhowni Bombay.

The Victoria Street and International Anti-Vivisection Society.

AFFILIATED SOCIETIES AND BRANCHES.

BRISTOL AND WEST OF ENGLAND:
 President, JOSEPH STORRS FRY, Esq.
 Hon. Sec., Mrs. ROSCOE, Crete Hill, Westbury-on-Trym.
 Sec., Miss FLORENCE BAKER, 20, The Triangle.
BEDMINSTER:
 Hon. Sec., Miss EVANS, Stackpool Road.
BIRMINGHAM:
WORKING MEN'S SOCIETY:
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M. PASTEUR'S THREE-FOLD HECATOMB. 151

THE TALE OF THE 334 DEAD.

[CORRECTED TO NOVEMBER 10TH, 1896.]

IMPORTANT TESTIMONY AS TO THE ACCURACY OF THESE STATISTICS.

Q. 2057.—Was this supplement to THE ZOOPHILIST of 21st [1st] July, 1887, giving details as to M. Pasteur's Necrology, before you when you were on the Pasteur Commission (handing the same to the witness)?—Yes, I think we had this statement before us.

Q. 2058.—Do you know whether it is accurate?—I believe it is; it seems to me to have been drawn up with great care.—*Extracted from the Evidence of Dr. Lauder Brunton.—Report of Lords' Committee on Rabies in Dogs, 1887.*

N.B.—It has been claimed on behalf of Pasteur that on dogs the success of his method was invariable. Had the analogy between dogs and mankind, therefore, been perfect, it should never have failed with the latter. It does fail, and so the experimental basis is discredited; but it is sought to rehabilitate it by saying that the average mortality is small. When persons bitten by dogs only suspected of being mad, and even those merely licked by dogs, are reckoned among the total treated, and a good many actual deaths are discounted, it is easy to make a low average. The honesty of the process is, however, another matter.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
INOCULATED IN PARIS.				1885:	1885:	1885:	1885:
1	Jacques Bonenfant...	Hospital Lariboisière, Paris ...	Dog	Aug. 30	Sept. 1	Sept. 7	<i>Journal de Médecine de Paris</i> , December 19 (1886.)
2	Louise Pelletier ...	Paris ...	Dog	Oct. 3	Nov. 9	Dec. 4	<i>Intransigeant</i> , December 8.
				1886:	1886:	1886:	1886:
3	Mathias Kakulev (or Kajoronoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	Mar. 23	Died at Hotel Dieu, Paris ; <i>La France</i> , March 24.
4	Wladimir Phenogenoff (or Ivanoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	April 3	Died at Hotel Dieu, Paris ; <i>Événement</i> , April 4.
5	Peter Wasiliev Golowinski	Russia ...	Wolf	Mar. 1	Mar. 13	April 7	Died at Hotel Dieu, Paris ; <i>Intransigeant</i> , April 18.
6	Dimitri Borowskoff...	Russia ...	Wolf	Mar. 25	April 5	April 20	Died in Paris ; <i>Intransigeant</i> , April 22.
7	Ivanovna Schtcherbakoff ...	Russia ...	Wolf	Mar. 25	April 5	April 22	Died at Salpêtrière, Paris ; <i>Petit Journal</i> , April 25.
8	A Woman (name unknown)	Wloekaveck, Russia	Wolf	...	...	May 31	<i>Ami du Peuple</i> , June 6.
9	(Name unknown) ...	Russia ...	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
10	(Name unknown) ...	Russia (at Moscow)	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
11	Christin (aged 6) ...	Evian, Savoy ...	Dog	May 14	May 20	July 4	<i>Journal de Médecine de Paris</i> , July 18.
12	John Gagu (or Gager) ...	Roumania ...	Dog	May 11	May 25	June 7	<i>Daily News</i> , June 7.
13	(¹) Eloina Lagut (aged 11)	Dole, Jura ...	Dog	May 18	May 24	June 17	Exchange Company's Telegram, June 24.
14	A Woman (name unknown)	Russia ...	Wolf	...	...	July 6	<i>Lancet</i> , July 31.
15	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Under
16	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Dr. Winow's
17	(Name unknown) ...	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } care.
18	Marius Bouvier (adult) ...	Grenoble ...	Cat	Apr. 30	May 4	July 21	<i>Le Temps</i> , Paris, July 22—25.
19	A Boy (aged 13) ...	Dordrecht ...	Cat	June 18	June 25	Aug. 4	<i>Daily News</i> , August 10. (Paris correspondence.)
20	(¹) Peytel, Henri (aged 6)	Poleymieux, Rhone	Dog	June 28	June 30	July 17	<i>Le Petit Lyonnais</i> , August.
21	A Young Man ...	Gatschina ...	Dog	...	...	Aug. 10	<i>Novos Vremya</i> , Russian Journal, August 11.
22	(¹) Bergeron Clédière (21 mos.)	Bordeaux ...	Dog	June 17	June 21	Aug. 17	<i>Daily News</i> , August 18. (Paris correspondence.)
23	Josefa Pinta Santiago ...	Ferrol, Spain ...	Dog	...	...	Aug. 16	<i>Le Matin</i> , Paris, August 18.
24	A young woman (aged 14) ...	Reus, Spain...	Dog	July 5	...	Aug. 20	Madrid correspondence, based on <i>La Epoca</i> .
25	Harry Collinge (aged 10) ...	Rawtenstall, Lancs.	Dog	July 6	July 15	Aug. 20	Manchester and London Journals, August 23.
26-8	Three Patients ...	Spain ...	Dog	...	...	Sept.	<i>Correspondancia</i> , Madrid, Sept.
29	(¹) Moulis Andre (6 years)	Paris ...	Dog	July 31	Aug. 6	Sept. 8	<i>Journal de Médecine de Paris</i> , November 7.
30	Zélie Leduc (70) ...	...	Dog	July 14	July 18	Sept. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
31	Louis Grand (41) ...	France ...	Dog	Sep. 5	Sep. 14	Oct. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
32	Duresset, Ed. ...	France ...	Dog	Aug.	Sept.	Sept.	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
33	(¹) Astier (2 years) ...	Paris ...	Dog	Aug. 4	Aug. 5	Sept. 16	<i>Journal de Médecine de Paris</i> , November 7.
34	Mathieu Videau (3 years)	Villeneuve-d'Ornon	Dog	Feb. 24	Feb. 27	Sept. 24	<i>Le Temps</i> , Paris, October 2.
35	(²) Moermann, a Gamekeeper	Sarthe ...	Dog	June 28	Aug. 11	Sept. 7	<i>Le Patriote</i> , Brussels, September 14.
36	(Name unknown) Bitten by a dog the property of Prince de Lucinge	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } Admitted
37	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } by Dr. Chautemps, Sor-
38	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } bonne,
39	(Name unknown) ...	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } Oct. 10, 1886.
40	(¹) Magneron Norbert (18)	Talence, Bordeaux	Dog	July 25	Aug. 1	Oct. 12	<i>La Science Libre</i> , Paris, October 24.
41	Amélie Ozimska ...	Holbiele, Vladimir (Russia)	Dog	May	10th day	Feb., 1887	<i>Courrier de Varsovie</i> , February 17, 1887.
INOCULATED AT THE PASTEUR INSTITUTE, ODESSA.							
42	Miroslaff Panoff (14) ...	Odessa ...	...	...	...	Within four mths.	} <i>Novos Vremya</i> , September 14.
43	Tissenko (10) ...	Odessa ...	...	...	...	...
44	Jean Nowogiloff (12) ...	Odessa ...	...	...	...	...
45	(Name unknown) ...	Inhabitants of {	...	...	...	Within 4 mths.	} <i>Novos Vremya</i> , September 14.
46	(Name unknown) ...	Kostroma }	...	...	...	...

(¹) Admitted by M. Pasteur or Dr. Chautemps. (*Journal de Médecine de Paris*, November 7.)

(²) Jamin, another man bitten by the same dog, but not inoculated, also died.—

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886 :	1886 :	1886 :	1886 :
47	A Peasant, name unknown (64)	Odessa	Wolf	...	...	July 7	<i>La Semaine Médicale</i> (quoted in <i>Lancet</i> , August 21).
48	Tyneuho	Son Station-master, Lioubotinn ...	Dog	July 4	July 10	Aug 14	<i>Journal de Médecine de Paris</i> , November 14.
49	Paul Potatkin (7) ...	Odessa	Dog	June 27	June 30	Aug 15	} <i>Journal de Médecine de Paris</i> , October 17, and <i>Intransigent</i> , October 13.
50	Vassa Voropaïef (16) ...	Odessa	Dog	June 27	June 30	Aug 22	
51	Mirochwichenko ...	Kharkoff	Dog	June 20	June 28	Aug. 3	
52	Ilyinski	Odessa	Dog	July 7	July 7	Aug. 20	} <i>Journal de Médecine de Paris</i> , November 7.
53	Bolodinn (Simon) ...	Gagarinn	Wolf	June	June	Oct. 12	
54	Kushejow (peasant) ...	Odessa ... ..	...	...	July 15	Oct. 12	<i>Novoé Vremya</i> and <i>Science Libre</i> , November 7.
55	Anastasia Bretschkow ...	Odessa ... ..	...	...	4 days after bite	Oct. 14	Dr. Kessler, St. Petersburg.
56	Popow	Belgorod ... ..	...	...	...	...	Dr. Kessler, St. Petersburg.
				1887 :	1887 :	1887 :	1887 :
57	Man (25)	Oster (Tscherni-gov) ... }	Wolf	...	...	...	{ Submitted to the Intensive Treatment.— <i>Journal de Médecine de Paris</i> , August 28, 1887.
58	Child (10) ... ..			...	...	...
59	A Man (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	} <i>Daily News</i> , Aug. 30; from its Odessa Correspondent.
60	A Boy (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	
61	A Boy (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	} <i>Daily News</i> , August 30; from its Odessa Correspondent.
62	— (name unknown) ...	Caucasia	Wolf	...	...	Sept.	
63	— (name unknown) ...	Caucasia	Wolf	...	...	Sept.	} <i>Daily News</i> , September 12; from its Odessa Correspondent.
64	A Girl (12, name unknown)	Caucasia	Wolf	...	...	Sept.	
				1888 :	1888 :	1888 :	1888 :
65	Maxime Schilla	Sebastopol (near)	Dog	March	March	March	<i>Novoé Vremya</i> , March 27th.
66	Nasar Ossatschenko ...	Odessa	Dog	...	...	July	<i>La Pair</i> , Paris, July.
				1889 :	1889 :	1889 :	1889 :
67	Anton Monastersky ...	Kieff	Dog	May	May	May	<i>Odessa Zeitung</i> , June 2.
INOCULATED ELSEWHERE IN RUSSIA.				1886 :	1886 :	1886 :	
68	Arthur Stoboi (boy) ...	Lublin	Dog	July	August	Nov. 23	<i>Riga Tageblatt</i> , December 21, 1886. The dog lived and appeared to be perfectly healthy.
69	Wassilieff (peasant) ...	Jakhnov (Pskow)	Dog	...	...	...	Inoculated at St. Petersburg.— <i>Journal de Médecine de Paris</i> , March 13, 1887.
				1887 :	1887 :	1887 :	1887 :
70	— (peasant, 28)	Pavlovo	Dog	Feb. 24	Mar. 4	Mar. 20	Dr. S. Warschawski, in <i>Russkaja Medicina</i> .
71	A Peasant (name unknown)	Kromy	Dog	July 25	July 26	Sept. 20	This peasant died of paralytic rabies, contracted at laboratory.— <i>Journal de Médecine de Paris</i> , Oct. 23.
72	A man (name unknown) ...	Circassia	Wolf	Aug. 1	Aug. 7	Sept.	} <i>Journal de Médecine de Paris</i> , October 23.
73	A Child (name unknown) ...	Circassia	Wolf	Aug. 1	...	Sept.	
74	A Child (name unknown) ...	Circassia	Wolf	Aug. 1	...	Sept.	
				1889 :	1889 :	1889 :	1889 :
75	(*) W—, Helen (6) ...	Biela (Sjediz) ...	Dog	July 15	July 15	Aug. 9	Dr. Rodkewitsch, in <i>Russkaja Medicina</i> , September.
Submitted to the Intensive Treatment.				1886 :	1886 :	1886 :	1886 :
76	Joseph Goffi, alias Smith (26)	Brown Institution, London	Cat	Sept. 4	Sept. 6	Oct. 20	"His death was due to the virus of rabies."— <i>Report of Committee to Local Gov. Board</i> , 1887, p. vi.
77	Rovati, Luigi (30)	Modena	Dog	Sep. 12	Sep. 20	Oct. 23	<i>Journal de Médecine de Paris</i> , March 13 (1887).
78	(*) Clergeot-Moulin (27) ...	Paris	Dog	Aug. 7	Aug. 11	Oct. 24	Died at the Tenon Hospital, Paris.
79	Edward, cabman (34) ...	Versailles	Dog	...	...	Oct. 30	<i>Le Science Libre</i> , Paris, November 14.
80	(*) Wilde, Arthur	Rotherham	Man	...	...	Nov. 3	<i>Rotherham Advertiser</i> , November 6.
81	Sodini, B. (46)	Constantine	Dog	Oct. 12	Oct. 21	Nov. 24	Professor Peter (<i>Lancet</i> , January 15, 1887).
82	Ronyer, Arthur (12) ...	58, Rue de Bretagne, Paris ...	Dog	Oct. 20	Oct. 21	Nov. 26	<i>Journal de Médecine de Paris</i> , December 5, 1886.
83	Letang, père	Gourgeon	Dog	Nov. 3	Nov. 8	Dec. 8	Professor Peter (Letter to, from Dr. Pitoy).
84	Réveillac, Louis (20) ...	France	Dog	Nov. 4	Nov. 6	Dec. 21	<i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887.
85	(*) Née, Leopold (42) ...	Arras	Dog	Nov. 12	Nov. 17	Dec. 17	<i>Journal de Médecine de Paris</i> , January 2, 1887.
						1887 :	1887 :
86	Jansen, Louis Victor (47) ...	Dunkirk	Dog	Aug. 19	Aug. 21	Jan. 1	Professor Peter (<i>Lancet</i> , January 15).
87	Gérard, Amédée (28) ...	Boran (Oise) ...	Dog	Dec. 1	Dec. 3	Jan. 3	Professor Peter (Letter to, from Medical Attendant).
88	Goriot, Paul (14)	Paris	Cat	Nov. 30	Dec. 21	Jan. 15	Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30.
89	Albert (woman)	Vallouise (Basses Alpes)	Dog	Dec. 20	Dec. 25	Jan. 5	Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.

[NOTE.—The intensive method is abandoned about May or June, 1887.]

(*) Other children bitten by the same dog, and not inoculated, survive; the dog disappeared. (*) Admitted by M. Pasteur or Dr. Chautemps. (*) Dr. J. H. Clarke's Opinion on Facts as reported: Death not due to hydrophobia, but probably to Pasteur's inoculations, the symptoms not being those of any known disease. (*) The dog in this case was pronounced not to have been mad.

NO.	PATIENTS.	LOCALITY.	BITTEN BY	ON		FIRST INOCU- LATION.	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA.
				1886 :	1886 :			1887 :
90.	Fonlup (30)	Tour du Pin (Isère)	Dog	Dec. 1	Dec. 12	Jan. 24	Jan. 24	<i>Journal de Médecine de Paris</i> , February 6.
91	Bergé (40)	Bordeaux	Dog	July	3 days after bite.	Jan. 30	Jan. 30	Dr. Pitres made the autopsy and declared that the man died of hydrophobia. <i>Journal de Médecine de Paris</i> , February 6.
92	Alphand (woman, 42)	Madeleine (Paris)	Dog	Dec. 13	Dec. 20	Jan. 30	Jan. 30	<i>Journal de Médecine de Paris</i> , March 13.
93	Saintes (child)	Maison-Carrée, near Alger	Dog	...	...	Feb. 24	Feb. 24	<i>Journal de Médecine de Paris</i> , March 13.
94	Chavagnac, Louise (13)	Arbe	Dog	Oct.	Oct.	Mar. 10	Mar. 10	<i>Journal de Médecine de Paris</i> , March 20 and July 31.
95	Sans Ramon	La Siréna, Badajoz, Spain	Wolf	Feb. 15	Mar. 15	Mar. 20	Mar. 20	Dr. Dujardin-Beaumetz. [Died under treatment.]
96	(¹) Ballasteros	La Puerta, Prov. of Jena, Spain ...	Dog	Feb. 9	Feb. 20	Mar. 24	Mar. 24	} <i>El Resumen</i> , a Spanish journal, quoted in <i>Journ. de Médecine de Paris</i> , April 24.
97	A person (no name given) ...	Navas de San Juan (Jena), Spain ...	Dog	...	...	Mar. 26	Mar. 26	
98	(¹) A woman (41)	Baeza, Spain ...	Dog	...	...	Apr. 23	Apr. 23	} <i>Lancet</i> , June 4, Paris Correspondence.
99	Ph. Hydram (56)	Sallèle, France ...	Dog	Oct. 5	Oct. 10	Apr. 17	Apr. 17	
100	J. Hayden (8)	Thurles, Ireland ...	Dog	Apr. 16	Apr. 19	May 19	May 19	<i>Lancet</i> , June 4, and <i>Freeman's Journal</i> , Dublin, May 27.
101	Valentin, Emile (16)	Reherrey (France)	Dog	Feb. 22	Feb. 28	July 27	July 27	<i>Progrès de l'Est</i> , quoted in <i>Journal de Médecine de Paris</i> , September 11.
102	Pénichaud (18)	Poulaines (Indre), France	Dog	June 12	June 14	Aug. 19	Aug. 19	Dr. Bretheau (Valençay, Indre), in <i>Journal de Médecine de Paris</i> , September 4.
Under the Third Formula.								
103	Hurot, Paul (42)	Rue St. Bernard, Paris	Dog	May 29	May 30	July 4	July 4	<i>Figaro</i> , Paris, July 5.
104	Gachet, Jean Baptiste (25)	Vierzon (Cher) ...	Dog	Apr. 4	Apr. 10	May 2	May 2	} Dr. Lutaud, Editor <i>Journal de Médecine de Paris</i> . Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
105	Cipriano, Rosario (42) ...	Torretta, Sicily ...	Dog	Mar. 13	Mar. 18	May 7	May 7	
106	Bourgeot, Jules	Audigny (Aisne)	Dog	Apr. 24	Apr. 28	July 11	July 11	Dr. Peter's Speech, Academy of Medicine, July 12.
107	Mangione, Andrea (82)	Palermo, Sicily ...	Dog	May 24	June 4	July 12	July 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
108	Desclide (aubergiste) ...	Larochehoucauld (Charente) ...	Dog	May 22	May 23	July 21	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by Dr. Nadaud.)
109	Jenle, Jeanne M. (57) ...	Arcezac (Hautes- Pyrénées) ...	Dog	Mar. 27	Mar. 29	July 21	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by M. Courrèges.)
110	Cahill, Martin (29)	Templemore, Ireland	Dog	June 14	June 27	Aug. 14	Aug. 14	<i>Standard</i> (and other London papers), August 18.
111	(²) Doneraile, Lord (69) ...	Doneraile Court, co. Cork, Ireland	Fox	Jan. 14	Jan. 26	Aug. 26	Aug. 26	<i>Times</i> , August 27. <i>Journal de Médecine de Paris</i> , September 4.
112	Kirkham, Albert E. (5) ...	Lancaster	Dog	July 18	July 26	Aug. 27	Aug. 27	<i>Daily Telegraph</i> , August 30. <i>Lancet</i> , June 16, 1888.
113	Cagarelli, Anna	Fiorano, Province of Modena ...	Dog	June 13	June 20	Sept. 12	Sept. 12	<i>Roma</i> , Neapolitan newspaper, Sept. 17 (confirmed by letter from the Syndic of Fiorano, October 5).
114	(Name unknown)	Portugal	Wolf	...	...	...	...	} <i>Daily Chronicle</i> , London, September 23; from its Paris Correspondent. [The patients were treated in Paris.]
115	(Name unknown)	Portugal	Wolf	...	...	...	...
116	(Name unknown)	Portugal	Wolf	...	...	...	...	} <i>Weekly Dispatch</i> , September 25; <i>Tablet</i> , October 8.
117	Padre Luiz	Cabanos, Portugal	Wolf	July 5	Aug. 2	Sept. 21	Sept. 21	
118	(Name unknown)	Portugal	Wolf	...	...	...	...	} <i>The Commercio Portuguez</i> , quoted in <i>Journal de Médecine de Paris</i> , October 23.
119	(Name unknown)	Portugal	Wolf	...	...	...	...
120	(Name unknown)	Portugal	Wolf	...	...	...	...	} Dr. Hallade, in <i>Journal de Médecine de Paris</i> , Oct. 2.
121	(Name unknown)	Portugal	Wolf	...	...	...	...
122	Jammot (woman, 38) ...	La Garenne	Cat	Aug. 3	Aug. 4	Sept. 24	Sept. 24	<i>Manchester Guardian</i> , October 5; also, <i>British Medical Journal</i> , October 15.
123	(⁴) Lindley, Fred. (26) ...	Cumberworth, Hud- dersfield ...	Dog	Aug. 1	Aug. 6	Oct. 4	Oct. 4	<i>Journal de Médecine de Paris</i> , October 23.
124	Saulat, Georgette (5 years)	35, Rue de Chau- fourniers, Paris	Dog	July 9	July 9	Aug. 4	Aug. 4	<i>Journal de Médecine de Paris</i> , October 23.
125	Marchois (8 years)	Senlis	Dog	July 3	July 5	Aug. 16	Aug. 16	<i>Journal de Médecine de Paris</i> , October 23.
126	Pliego, Joseph	Portugal ... ..	...	July	Aug. 30	Aug. 30	Aug. 30	<i>Journal de Médecine de Paris</i> , October 23.
127	Palu, Eugénie (8)	Codalet, France ...	Dog	Sept. 1	Sept. 6	Oct. 10	Oct. 10	<i>Journal de Médecine de Paris</i> , November 6.
128	Thierry, Paul (4)	Melleville, France	Dog	Sept. 1	Sept. 7	Oct. 15	Oct. 15	<i>Journal de Médecine de Paris</i> , November 6.
129	Sintés, Edward (child) ...	Hussein-Dey (Algeria) ...	Dog	Jan. 19	Jan. 25	Oct. 17	Oct. 17	<i>Intransigant</i> , Paris, Nov. 21. [Inoculated in Paris.]
130	Cauvy, Dr.	Béziers, France ...	Dog	Sept. 30	Oct.	Nov. 3	Nov. 3	<i>Journal de Médecine de Paris</i> , November 13.
131	(³) Vial, Rose (70)	Arles, France ...	Dog	Aug. 29	Sept. 5	Oct. 3	Oct. 3	<i>Journal de Médecine de Paris</i> , December 11.
132	Valla	Salettes	Dog	Nov. 8	Nov. 13	Dec. 20	Dec. 20	<i>Semaine Médicale</i> , February 1, 1888.
133-8	Six persons	Treated at Turin	—	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
1888 :								
139	Boy (4 yrs., name unknown)	Paris	Dog	Dec. 6	Dec. 12	Jan. 22	Jan. 22	<i>Medical Press</i> , London, March 21.
140	Woman (52, name unknown)	Paris	Dog	Jan. 23	Jan. 29	Feb. 17	Feb. 17	<i>Medical Press</i> , London, March 21.
141	Sidi-ben-Isral	Algeria	Dog	...	...	Mar. 18	Mar. 18	<i>Echo</i> , London, March 19. (Death occurred at the Cochin Hospital.)
142	Marinot, Alphonse (soldier)	Paris	Dog	Feb. 15	Feb. 15	Apr. 1	Apr. 1	<i>Journal de Médecine de Paris</i> , April 22.
143	S— (54, farrier)	Paris	Dog	Nov. 9	Nov. 11	Apr. 3	Apr. 3	<i>Journal de Médecine de Paris</i> , April 22.
144	Denis, Cotte (28)	Thiers (Puy-de- Dôme)	Dog	...	Mar. 6	Apr. 12	Apr. 12	<i>Moniteur du Puy de Dôme</i> , April 12.
145	Child (6½ years)	Paris	Dog	April	April	April	April	Dr. Dujardin-Beaumetz. — <i>Le Temps</i> , Paris, May 4.
146	Poulet, M. (20)	Pecq, near Paris	Dog	Dec. 6	Dec. 8	May 16	May 16	<i>La Paix</i> , Paris, July.
1888 :								

(¹) Each died four days after the return from Paris.—(*Journal de Médecine de Paris*, January 2, 1887.) (²) M. Pasteur has stated that Lord Doneraile was not treated under the intensive method. (³) No clinical or experimental proof that the animal was affected with rabies has been produced.—*Journal de Médecine de Paris*, December 11, 1887. (⁴) See No. 265; the two Lindleys were brothers and inoculated together.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1888:	1888:	1888:	1888:
147	Avray, Paul (11) ...	Boisguillaume (Rouen) ...	Dog	Apr. 12	Apr. 17	May 29	<i>Le Petit Journal</i> , Paris, May 31.
148	Olin, Eugene ...	Rue Curial, Paris	Dog	Apr. 23	Apr. 26	June 17	<i>Annales de l'Institut Pasteur</i> , Paris, July 25.
149	(¹) Bertin (child, 18 months)	Gentilly ...	Dog	May 15	May 17	June 20	<i>L'Intransigeant</i> , Paris, September 10.
150	Villemain, P. (31 months)	Marseilles ...	Dog	May 9	May 14	June 23	<i>Lancet</i> (Paris correspondence), September 15.
151	Labeaume (37, labourer)	Châtenay ...	Cat	May 29	May 30	July 6	<i>Lancet</i> (Paris correspondence), September 15.
152	A man (name unknown, 28)	France ...	Dog	Dec., '87	Dec., '87	July 1	<i>Medical Press</i> , July 11.
153	Ducos, Mathieu (28) ...	St. Jean de Bonnefond (Loire) ...	Cat	June 16	June 20	July 18	<i>L'Intransigeant</i> , Paris, September 10.
				1886:	1886:		
154	Sinardet, Alphonse (26) ...	Polliot (Ain) ...	Dog	April 26	May 3	July 28	<i>Annales de l'Institut Pasteur</i> , September 25.
				1888:	1888:		
155	Mesnil, L. (44) ...	Châtenay ...	Cat	Mar. 25	Mar. 26	July 30	<i>L'Intransigeant</i> , Paris, September 10.
156	Sarasin, M ^{me} . (44) ...	St. Meurice, Switzerland ...	Dog	July 1	July 4	Aug. 4	<i>L'Intransigeant</i> , Paris, September 10.
157	Guers, Joseph (27) ...	Chelles (Seine-et-Marne) ...	Dog	July 13	July 16	Aug. 8	<i>L'Intransigeant</i> , Paris, September 10.
158	N — (name unknown) ...	... ..	Dog	July 15	July 16	Aug. 20	Dr. Levraud (<i>Journal de Médecine de Paris</i> , Nov. 18).
159	Bacchi, Emilia (22) ...	Lercara, Sicily ...	Dog	July 19	July 20	Sept. 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
160	Couzinier, Jean (65) ...	Courbevoie (Seine) ...	Dog	Sept. 12	Sept. 12	Oct. 14	<i>Annales de l'Institut Pasteur</i> , October 25.
161	Bourelly, Leon (14) ...	Marseilles ...	Dog	May 27	June 7	Nov. 2	<i>Annales de l'Institut Pasteur</i> , November 25.
162	Ricciola, Antonia (3½) ...	Palermo ...	Dog	Nov. 29	Dec. 3	Dec. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
163	Child (name unknown) ...	Rio de Janeiro ...	Dog	...	...	28rd day	<i>Medical Press</i> , December 26.
164	One person ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
				1889:	1889:		
165	(*) Mayland, Rose (3) ...	Belbeuf (Seine-Inférieure) ...	Dog	Dec. 13	Dec. 15	Jan. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
166	X — (19) ...	Peyrestortes (Pyrénées-Orientales) ...	Dog	Dec. 8	Dec. 9	Jan. 9	<i>Journal de Médecine de Paris</i> , February 17.
167	(*) Allègre, Louis (14) ...	Cambes (Gironde) ...	Dog	Dec. 25	Dec. 28	Jan. 14	<i>Annales de l'Institut Pasteur</i> , January 25.
168	Palmeri, Melchiorre (18) ...	Calatafimi, Sicily	Dog	Nov. 30	Dec. 1	Jan. 20	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
169	Druant, Blanche (16) ...	Lariboisière, Paris	Dog	Dec. 25	Dec. 26	Feb. 8	<i>Journal de Médecine de Paris</i> , February 24.
				1889:	1889:		
170	Druaux, B. (15) ...	Aubervilliers ...	Dog	Jan. 7	Jan. 9	Feb. 11	<i>Lancet</i> , March 16.
				1888:	1888:		
171	J. L. Dufour (72) ...	Veyras ...	Dog	Dec. 23	Dec. 25	Feb. 13	<i>Lancet</i> , March 16.
				1889:	1889:		
172	Arenés, Gilles (50) ...	Soler (Pyrénées-Orientales) ...	Dog	Jan. 26	Jan. 29	Feb. 24	<i>Annales de l'Institut Pasteur</i> , March 25.
				1888:	1888:		
173	Rey, Ernest ...	Oissel ...	Dog	Dec. 13	Dec. 17	Mar. 4	<i>Lancet</i> , March 23.
				1889:	1889:		
174	An Italian Child ...	Cairo ...	Dog	Feb. 4	Feb. 9	Mar. 5	<i>British Medical Journal</i> , May 11. [Treated at Naples.]
175	Mahout, Ed. (8) ...	Levallois - Perret (Seine) ...	Dog	Jan. 31	Feb. 3	Mar. 9	<i>Annales de l'Institut Pasteur</i> , March 25.
176	(*) Rascol, Pierre (52) ...	Murat (Tarn) ..	Dog	Feb. 28	Mar. 9	Apr. 14	<i>Journal de Médecine de Paris</i> , October 13.
				1887:	1887:		
177	Moens, Henri (24) ...	Anvers (Belgium)	Dog	Mar. 2	Mar. 7	May 17	<i>Annales de l'Institut Pasteur</i> , June 25.
		[du-Nord)		1889:	1889:		
178	Maillet, M ^{me} . (86) ...	Coatascorn (Cotes-	Dog	April 27	May 3	June 2	<i>Annales de l'Institut Pasteur</i> , June 25.
179	Waleley, Patrick (7) ...	Newry, Ireland ...	Dog	May 3	May 20	June 13	<i>Annales de l'Institut Pasteur</i> , July 25.
180	(*) Condurrier, Gustave (7)	Noyarey, Grenoble	Dog	June 9	June 15	June 24	<i>Ibid.</i>
181	A Child (name unknown) ...	Milan ...	Dog	May	May	June	} <i>Journal de Médecine de Paris</i> , June 30. [This and the four preceding cases were treated at the Institute of Dr. Bareggi, of Milan.]
182	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
183	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
184	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
185	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
186	Valli, Romeo (11) ...	Milan ...	Dog	May 30	May 31	June 27	} Treated by Dr. Barat- tieri.
187	Bulli, G. (child) ...	Milan ...	Dog	May 30	May 31	June 28	
188	Lurashi, Rosa (14) ...	... ..	Dog	June 10	June 11	June 28	
189	Trottet, G. (13) ...	Paris ...	Dog	May 23	May 25	July 14	<i>Journal de Médecine de Paris</i> , July 28.
190	Gilbert, Prosper (11) ...	Brussels ...	Dog	June 18	June 24	Aug. 1	<i>Annales de l'Institut Pasteur</i> , August 25.
191	Claudel, M. ...	Nancy, France ...	Dog	July 8	July 19	Aug. 6	<i>Journal de Médecine de Paris</i> , October 6.
192	Sottiaux, J. B. (54) ...	Bougival (Seine-et-Oise) ...	Dog	July 5	July 5	Aug. 13	<i>Annales de l'Institut Pasteur</i> , August 25.
193	Manuel, José (6) ...	Asteazu (Spain) ...	Dog	June 30	July 9	Aug. 29	<i>Annales de l'Institut Pasteur</i> , October 25.
194	Auroux, Gilbert ...	Néris-les-Bains ...	Dog	July 7	July 9	Aug. 19	M. Boissier, <i>Journal de Médecine de Paris</i> , Aug. 25.

(¹) This and several following cases are admitted by M. Pasteur, and the details have been revised from the official "Annals" of his Institute. (²) Died while still under treatment. (³) Another man bitten by the same dog lived, and Prof. Peter, of Paris, stated that Rascol died of *rage du laboratoire* or Pasteur's rabies.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1889 :	1889 :	1889 :	1889 :
195	Yorke, Claude James (7) ...	Ch. Fenton, Yorks.	Dog	Aug. 5	Aug. 9	Aug. 31	<i>Yorkshire Post</i> , September 5.
196	Bia, Albert (boy) ...	Sala Braganza ...	Dog	Nov. 4	Nov. 5	Nov. 24	<i>Secolo</i> , Milan, November 25.
197-8	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
199	Monastirska, A. (6) ...	Charkow, Russia...	Dog	Jan. 27	Jan. 29	Feb. 28	Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
200	Malikyna, Acouline (17) ...	Charkow, Russia...	Dog	June 23	July 1	July 24	
201	Garbounoff, Matrena (50)	Charkow, Russia...	Dog	Aug. 12	Sept. 5	Oct. 9	
202	Mesenzoff, Pierre (42) ...	Charkow, Russia...	Wolf	Apr. 1	Apr. 3	Oct. 10	
203	Aleksandroff, F. (40) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Oct. 23	
204	Alferenkoff, F. (28) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Oct. 25	
205	Bratelski, Tikon ...	Charkow, Russia...	Wolf	Oct. 13	Oct. 18	Nov. 6	
206	Plotnikoff, L. (55) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Nov. 10	
207	Sawelieff, W. (27) ...	Charkow, Russia...	Dog	June 11	June 13	Dec. 25	
						1890 :	
208	T—, Alice (8) ...	Paris ...	Dog	Nov. 16	Nov. 19	Feb. 9	<i>Journal de Médecine de Paris</i> , February 16.—Report of Dr. Potin.
				1890 :	1890 :		
209	Paris, Louis (10) ...	Preuilly (Indre-et-Loire) ...	Dog	Jan. 14	Jan. 17	Feb. 18	Dr. Durand in <i>Annales de l'Institut Pasteur</i> , April 25.
210	Rankin, Joseph (13) ...	Coleraine, Ireland	Dog	Jan. 29	Feb. 2	Mar. 10	<i>Times</i> , London, March 13. [<i>Pasteur</i> , April 25.
211	Olivier, Florian (43) ...	Templeuve (Nord) ...	Dog	Jan. 27	Feb. 3	Mar. 15	Dr. Tison reported the case to <i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
212	Gerday, Louis (10½)	St. Georges (Belgium) ...	Dog	Mar.	Mar. 23	Mar. 31	<i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
213	Grant, Justin (52) ...	Birac (Lot-et-Garonne) ...	Dog	Mar. 23	Mar. 31	May 4	<i>Annales de l'Institut Pasteur</i> , May 25.
214	Dubois, Josephine (70) ...	Locquignol (Nord) ...	Dog	June 15	June 17	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
215	Dégéan, Albert (31) ...	Ste. Livrade (Lot-et-Garonne) ...	Dog	June 3	June 7	Aug. 6	Dr. Gaumeton reported the case to <i>Annales de l'Institut Pasteur</i> , August 25.
216	Casali, Bianca (7) ...	Copparo, near Ferrara, Italy ...	Dog	Aug.	Aug.	Aug. 29	<i>Roma</i> (Italian Journal), September 3. [Treated at Bologna.]
217	Baudino, Thérèse (13) ...	Bocca, nr. Cannes	Cat	July 30	Aug. 4	Sept. 4	<i>Annales Pasteur</i> , November 25.
218	Martin, Jules (7) ...	Cannes ...	Dog	July 18	July 19	Sept. 16	<i>Journal de Médecine de Paris</i> , September 21.
219	Vidalon, Sebastien (46) ...	Ille-sur-Tet, nr. Perpignan ...	Dog	Sept. 6	Sept. 10	Oct. 2	<i>Galvani's Messenger</i> , October 8, 1890.
220	Domenech, Jean (boy) ...	Perpignan ...	Dog	Sept. 6	Sept. 10	Oct. 3	<i>Galvani's Messenger</i> , October 8, 1890.
221	Fournés, Joseph (14) ...	Guyotville, Algeria	Dog	Aug. 1	Aug. 8	Oct. 14	<i>Annales Pasteur</i> , November 25.
222	(¹) Groussous, Jean (52) ...	Fedj-M'zala (Constantine) ...	Dog	Oct. 13	Oct. 22	Nov. 10	<i>Annales Pasteur</i> , November 25.
223-6	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
							1891 :
227	Birebent, Jules (24) ...	Pamiers, Ariège ...	Dog	Oct. 10	Oct. 14	Dec. 1	Dr. Allana, <i>Annales de l'Institut Pasteur</i> , January 25.
							1891 :
228	Drago, Vincenzo (50) ...	Tripi, Sicily ...	Dog	Nov. 18	Dec. 19	Jan. 5	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
229	Brousse, Raymond (24) ...	Toulonne (Gironde)	Dog	Aug. 16	Aug. 20	Jan. 15	<i>L'Indépendant des Basses Pyrénées</i> , January 22.
				1891 :	1891 :		
230	Terles, Barthélemy (59) ...	Sainte-Sixte (Lot-et-Garonne) ...	Dog	Jan. 1	Jan. 5	Feb. 8	<i>Annales de l'Institut Pasteur</i> , March 25.
				1890 :	1890 :		
231	Binet, Auguste (75) ...	Méaulte (Somme)	Dog	Dec. 5	Dec. 13	April 15	<i>Annales de l'Institut Pasteur</i> , May 25.
				1891 :	1891 :		
232	Frouin, Gaston (16) ...	Cubzac - les - Ponts (Gironde)	Dog	Apr. 27	May 3	June 1	<i>Annales de l'Institut Pasteur</i> , June 25.
233	(¹) Fridy, Mohammed D. (25)	Sfax (Tunis) ...	Dog	May 2	May 22	June 12	<i>Annales de l'Institut Pasteur</i> , June 25
234	Gagliani, Agata (4) ...	Palermo ...	Dog	May 4	May 6	June 18	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
				1889 :	1889 :		
235	(²) Juda, Isaac (28) ...	Salonica, Turkey	Dog	May 25	June 3	July 11	<i>Annales de l'Institut Pasteur</i> , September 25.
				1891 :	1891 :		
236	Milet, Henri (11) ...	Montrenil - sous - Bois (Seine) ...	Dog	June 18	June 23	July 20	<i>Annales de l'Institut Pasteur</i> , August 25.
237	Macca, Concetta (75) ...	Catania, Sicily ...	Dog	July 1	July 21	Aug. 2	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
238	Pélofi, Baptiste (21) ...	Jaurac (Aude) ...	Dog	Feb. 7	Feb. 14	Aug. 8	<i>Annales de l'Institut Pasteur</i> , September 25.
239	Varney, Henry (boy) ...	New York ...	Dog	...	...	Aug. 14	<i>Birmingham Daily Post</i> , August 15.
240	Inzerilla, Pietro (8) ...	Partinico, Sicily...	Dog	June 14	June 19	Aug. 15	Report of Drs. Blasi and Russo-Travali, Palermo.
241	(¹) Sommier, Joseph (6) ...	Joudes (Saône-et-Loire)	Dog	Aug. 12	Aug. 16	Sept. 2	<i>Annales de l'Institut Pasteur</i> , September 25.
242	Roig, Juan (13) ...	Puebla de Tiana (Spain) ...	Dog	Sep. 7	Sep. 12	Oct. 12	<i>Annales de l'Institut Pasteur</i> , November 25.
243	Morton, Robert D. (young man) ...	Columbia, S. Carolina, U.S.A. ...	Dog	Aug. 6	Aug. 7	Oct. 25	Treated at New York.— <i>Boston Post</i> , October 26. [of Lyons.
244	Carry, Louis (13) ...	Lyons ...	Dog	Sep. 11	Sep. 24	Oct. 29	Reported to Pasteur's <i>Annales</i> , (Nov. 25) by Dr. Roux
245	Bommelle, Xavier (54) ...	Remy (Oise) ...	Dog	Oct. 17	Oct. 20	Nov. 12	<i>Annales de l'Institut Pasteur</i> , December 25.
246	Bolinhas, José (4) ...	Crato (Portugal)...	Dog	Nov. 3	Nov. 13	Dec. 7	<i>Annales de l'Institut Pasteur</i> , December 25.

(¹) Died while still under treatment. (²) A remarkable case. The patient a doctor, went to Paris for treatment, and died of hydrophobia two years and two months afterwards.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
247-50	Four persons	Treated at Turin	—	1891 : —	1891 : —	1891 : —	1891 : <i>Relazione del Servizio Batteriologico, Turin, 1896.</i>
251	Lacombe, Ernest (30) ...	Palestro (Algeria)	Dog	Mar. 17	Mar. 25	Dec. 25	1892 : <i>Annales de l'Institut Pasteur, February 25.</i>
252	Beale, George (boy) ...	Kilkenny (Ireland)	Dog	Nov.	Nov.	Jan. 4	1892 : <i>Weekly Irish Times, Dublin, January 2.</i>
253	Hayden (9)	Carlow (Ireland)	Dog	May	May	Feb. 4	<i>Times, February 5.</i>
254	Drouet, Georgette (6) ...	D'Issy (Seine) ...	Dog	Feb. 7	Feb. 25	Mar. 11	<i>Annales de l'Institut Pasteur, March 25.</i>
255	Santhoux, Eugène (labourer)	Gex (Ain) ...	Dog	Feb. 9	Feb. 14	April 2	<i>Annales de l'Institut Pasteur, April 25.</i>
256	Pimenta de Castro, B. P. (15)	Vianna de Cas- tello (Portugal)	Cat	Mar. 2	Mar. 8	April 9	<i>Annales de l'Institut Pasteur, May 25.</i>
257	Micoin, Augustin (18) ...	Versailles ...	Cat	Mar. 15	Mar. 17	April 11	<i>Annales de l'Institut Pasteur, May 25, 1893.</i>
258	Ferudja, Francois (12) ...	Guelma, Algeria...	Dog	Apr. 5	Apr. 12	April 26	<i>Annales de l'Institut Pasteur, May 25, 1893.</i>
259	Labèze, Pierre (72)	Labèze	Dog	Apr. 9	Apr. 15	May 7	<i>Annales de l'Institut Pasteur, June 25.</i>
260	Segura, Sebastien (47)	Oran	Dog	Apr. 14	Apr. 24	May 15	<i>Annales de l'Institut Pasteur, June 25.</i>
261	Sauzia, Rosario (8) ...	Palermo ...	Dog	April 22	May 6	May 30	<i>Report of Drs. Blasi and Russo-Travali, Palermo, 1893.</i>
262	Mathias, Thomas (48) ...	Norvao, Portugal	Dog	June 15	June 30	July 14	<i>Annales de l'Institut Pasteur, August 25.</i>
263	Ruffini, Pietro (32) ...	Rocca di Papa, Italy	Dog	1891 : Oct. 23	1891 : Oct.	Aug. 27	Died at Rome. Case reported in Italian journals.
264	Desvignes, Gustave (39) ...	Avenue de Breteuil, Paris	Dog	1892 : July 23	1892 : July 26	Aug. 29	<i>L'Etoile Belge, Brussels, September 8.</i>
265	(¹) Lindley, Herbert (17) ...	Cumberworth, Hud- dersfield ..	Dog	1887 : Aug. 1	1887 : Aug. 6	Sept. 7	<i>Huddersfield Daily Chronicle, September 8.</i>
266	Van Faassen (9)	[land] Bennebrock (Hol-)	Dog	1890 : June 4	1890 : June 18	Oct. 15	<i>Annales de l'Institut Pasteur, December 25.</i>
267	Gernez, Achille (4½) ...	Beaumont-les-Cam- brai (Pas-de-Calais)	Dog	1892 : Oct. 25	1892 : Oct. 28	Nov. 18	<i>Annales de l'Institut Pasteur, December 25.</i>
268-9	Two persons	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico, Turin, 1896.</i>
270	Schirch, Louis (32) ...	Djdjelli (Algeria)	Dog	Aug. 22	Aug. 28	Oct. 24	1893 : <i>Annales de l'Institut Pasteur, January 25.</i>
271	Scherr, Emile (35) ...	Oran	Dog	Oct. 9	Oct. 16	Dec. 9	<i>Annales de l'Institut Pasteur, January 25.</i>
272	D'Almeida, José J. (10) ...	d'Aveiro (Portugal)	Dog	Nov. 28	Dec. 7	Dec. 30	<i>L'Eclair and other Paris Journals.</i>
273-8	Six Persons	Moscow	in	the	year	1892	<i>Dr. Goldenbach, Pasteur's Annales, September 25.</i>
279	(*) Guillon, Angustine (17)	Voiron (Isère) ...	Dog	Dec. 13	Dec. 16	Jan. 4	1893 : <i>Annales de l'Institut Pasteur, January 25.</i>
280	Duvivier, Charles (32) ...	51, rue Menilmou- tant, Paris ...	Dog	Oct. 18	Oct. 20	Jan. 7	<i>The Morning (Paris news), January 7, and Pasteur's Annales, February 25.</i>
281	Nardo, Francesca Maria (6)	Gioiosa, Sicily ...	Dog	May 15	May 18	June 1	1893 : <i>Report of Drs. Blasi and Russo-Travali, Palermo, 1896.</i>
282	Chetal, Antoine (26) ...	Aix-les-Bains ...	Dog	May 3	May 4	June 1	<i>Annales de l'Institut Pasteur, July 25.</i>
283	Chastaing, Léon (28) ...	Paris	Dog	May 12	May 15	June 25	<i>Annales de l'Institut Pasteur, July 25.</i>
284	Morel, Auguste (18) ...	Rue Portalis, Paris	Dog	May 30	May 30	Aug. 5	<i>Annales de l'Institut Pasteur, September 25.</i>
285	Mermont, Melchior ...	Bonneville ...	Dog	July 14	July 18	Aug. 6	<i>Annales de l'Institut Pasteur, August 25.</i>
286	Badaluccho, Mario (7) ...	Marsala, Sicily ...	Dog	July 28	Aug. 3	Aug. 17	<i>Report of Drs. Blasi and Russo-Travali, Palermo, 1896.</i>
287	Fages, Alfred (40) ...	Alais (Gard) ...	Cat	July 12	July 14	Aug. 20	<i>Le Gaulois, Paris, August 22, and Pasteur's Annales.</i>
288	Montessuy, J. M. (57) ...	St. Pierre-de-Ru- milly (H. Savoie)	Dog	July 14	July 18	Aug. 23	<i>Annales de l'Institut Pasteur, October 25. [Oct. 25.]</i>
289	Ollero, Nemesio (52) ...	Debicho, Cordova, Spain	Dog	Dec. 15	Dec. 26	Jan. 5	1894 : <i>Annales de l'Institut Pasteur, May 25.</i>
290	F. Carbonnell (53) ...	Pozzo-Blanco, Cordova ...	Dog	Dec. 18	Jan. 5	Jan. 26	1894 : <i>Annales de l'Institut Pasteur, May 25.</i>
291	Robert, Joseph (8) ...	Bougie (Constan- tine)	Dog	Oct. 4	Oct. 10	Feb. 16	1893 : <i>Annales de l'Institut Pasteur, April 25.</i>
292	A douanier	Souk-Ahras (Algeria)	Dog	Dec.	Dec.	Mar.	<i>Journal de Médecine de Paris, March 18.</i>
293	Fournès, Auguste ...	Chéragas (Algeria)	Dog	Aug. 1	Aug.	Mar. 12	<i>Journal de Médecine de Paris, March 18.</i>
294	Pialut, Huberte (56) ...	Neuilly	Dog	Dec. 31	Jan. 3	April 10	1894 : <i>Annales de l'Institut Pasteur, July 25.</i>

(¹) See No. 123; the two Lindleys were brothers, and were inoculated together. (*) Died while still under treatment.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCU- LATION.	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA
			BY	ON			
				1894 :	1894 :	1894 :	1894 :
295	Varesi, Giovanni (5) ...	Pianello Valtidone, Italy ...	Dog	Mar. 22	Mar. 23	May 15	<i>Il Secolo</i> (Milan), August 13, 1896. [Treated at Milan by Pasteur's intensive method.]
296	Oakes, Enoch (child) ...	Shawforth, Rochdale ...	Dog	May 31	June 5	June 29	<i>Manchester Courier</i> , July 23.
297	Desquincourt, Mdme. (43)	Liévin (Pas-de-Calais) ...	Dog	Feb. 16	Feb. 18	July 12	<i>La Croix</i> , Paris, July 20.
298	Bentivegna, Vincenzo (30)	Corleone, Sicily ...	Dog	Mar. 4	Mar. 6	not given	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
299	(¹) Stevenson, Malcolm (25)	Birkenhead ...	Dog	June 10	July 1	Aug. 8	<i>Birkenhead News</i> , August 11.
300	Delepine, boy (15) ...	St. Denis-des-Monts (Amfreville) ...	Dog	June 16	June 17	Aug. 12	<i>L'Industriel Elbeuven</i> , August 15.
							1895 :
301	Saussol, Louise (33) ...	Cessenon (Hérault) ...	Dog	July 5	July 10	Aug. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894 :
302	Vayre, Lonis (5) ...	Bize (Aude) ...	Dog	June 29	July 8	Sept. 1	<i>Annales de l'Institut Pasteur</i> , November 25.
303	Culotta, Michele (74) ...	Bagheria, Sicily ...	Dog	June 18	June 19	Sept. 13	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1895 :
304	Meynadier, Achille (39) ...	Sidi-bel-Abbès (Algeria) ...	Dog	Aug. 11	Aug. 19	Oct. 12	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894 :
305	Richard, Joseph (4) ...	Beaussemlant (Drôme) ...	Dog	Oct. 4	Oct. 7	Nov. 6	<i>Annales de l'Institut Pasteur</i> , November 25.
306	Bentley, James (18) ...	Clayton-le-Moors, Lancashire ...	Dog	Oct. 18	Oct. 23	Nov. 10	<i>Annales de l'Institut Pasteur</i> , November 25.
307	Morreale, Angelo (8) ...	Bagheria, Sicily ...	Dog	July 29	Aug. 2	Nov. 15	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
308-9	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1893.
							1895 :
310	Prévost, Joseph (58) ...	Issy (Seine) ...	Dog	July 30	Aug. 4	Nov. 22	<i>Journal de Médecine de Paris</i> , March 10th, and <i>Annales de l'Institut Pasteur</i> , May 25.
							1895 :
311	Barry, Séverin (62) ...	Vattetot-sur-Mer (Seine-Inférieure) ...	Dog	Dec. 7	Dec. 12	Jan. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
312	Rio, Julien Marie (7) ...	Missillac (Loire-Inférieure) ...	Dog	Dec. 20	Dec. 23	Jan. 22	<i>Annales de l'Institut Pasteur</i> , May 25.
							1895 :
313	Garrigues, Elisabeth (29) ...	Castelsarrazin (Tarn-et-Garonne) ...	Cat	Jan. 15	Jan. 18	Feb. 14	<i>Annales de l'Institut Pasteur</i> , May 25.
314	Stewart, Robertson (38) ...	Glasgow ...	Dog	Mar. 8	Mar. 11	Apl. 1	<i>North British Daily Mail</i> , April 2nd.
315	Longino, Salerno (14) ...	Borgetto, Sicily ...	Dog	Mar. 7	Mar. 9	Apl. 6	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
316	Corepetti, Luigi (7) ...	Bobbio, Italy ...	Dog	April 8	April 10	May 3	<i>Il Secolo</i> (Milan), August 13. [Treated in Milan according to Pasteur's intensive method.] 1896.
317	(³) Blutel, Isidore (27) ...	St. Georges-d'Ambery (Orne) ...	Dog	Apl. 22	Apl. 28	May 14	<i>Annales de l'Institut Pasteur</i> , November 25.
318	Kelly, James (6) ...	Belfast ...	Dog	Apl. 18	Apl. 23	June 25	<i>Irish News</i> , Belfast, June 27, and <i>Pasteur's Annales</i> , November 25.
319	(⁴) Walton, B. A. ...	Houston County, Ga., U.S.A. ...	Dog	May 19	May	June 30	<i>The Dog Question</i> , Dobbs Ferry, N.Y., August.
320	Danio, Diego (15) ...	Grotte, Sicily ...	Dog	May 25	May 31	July 4	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1894 :
321	Howard, Benjamin (14) ...	Hyde, Cheshire ...	Dog	Nov. 14	Nov. 18	Aug. 29	<i>Hyde Reporter</i> , August 31.
322	(⁵) Huard, Joseph (39) ...	Saint Ellier (Mayenne) ...	Dog	Dec.	Dec.	Sept. 14	<i>L'Eclair</i> (Paris), September 15.
							1895 :
323	Nothard, Samuel (28) ...	Todmorden, Lancs. ...	Dog	Sep. 8	Sep. 15	Oct. 17	<i>Manchester Guardian</i> , October 22.
324	(⁶) Wilkins, Ethel (3) ...	Twickenham Park ...	Dog	Oct. 13	Oct. 15	Nov. 11	<i>The Globe</i> , London, November 12.
325	Lo Presti Vito (55) ...	Vizzini, Sicily ...	Dog	Oct. 8	Oct. 16	Nov. 25	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1896 :
326	(⁷) Wallender, Miss ...	Temesvar, Hungary ...	Dog	Dec. 25	Dec. 26	Jan. 11	<i>Echo</i> (London), and other journals, Jan. 11 and 13.
327	Plescia, Francesco (10) ...	Contessa Entellina Sicily ...	Dog	Mar. 2	May 11	Feb. 10	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1896 :
328	(⁷) Labat, Pierre (37) ...	Bordeaux ...	Dog	Feb. 21	Feb. 25	May 24	<i>Annales de l'Institut Pasteur</i> , June 25.

(¹) Lieut. Stevenson, of the 93rd Highlanders, was bitten at Dalhousie, Punjab, India, where his regiment was stationed, and died of paralytic rabies at Birkenhead. (²) This patient was killed through jumping, while mad, from a third storey window; he was twice treated at the Pasteur Institute, in December, 1894, and April, 1895. (³) Became ill before the inoculations were finished, and died two days after their completion. (⁴) Treated at the Pasteur Institute, Budapest. (⁵) Treated at the Pasteur Institute, New York. (⁶) This small child received no fewer than 48 inoculations—24 during the last 36 hours of her life, and after her case had been pronounced to be hopeless by the doctors at the Pasteur Institute, Paris. (⁷) The biting dog fled and was not traced; the wounds (on the left hand and head) were at once cauterised with a red-hot iron.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCU- LATION	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
329	Lambert, Thos. D. (18½) ...	Stockport... ..	Dog	1895: Mar. 3	1895: Mar. 8	1896: June 20	1896: <i>Manchester Courier, Daily News</i> (London), and other journals, June 22; <i>Brit. Med. Journal</i> , July 4.
330	Boy	Orthez (Basses Pyrénées) ...	Dog	1896: June	1896: June	June 22	Died at l'Hôpital de la Pitié, Paris.— <i>L'Indépendant</i> (Pau), June 24.
331	A Child	Navarreux, Pau ...	Dog	—	—	June 26	Telegram from Pau in <i>Il Secolo</i> (Milan), June 26.
332	Chapelier-Marty (18) ...	Sauvagnou, Pau ..	Dog	June 1	June 2	June 29	<i>Daily News</i> (London), and <i>L'Indépendant</i> (Pau), June 30.
333	Openshaw, Thomas (man)	Radcliffe, Man- chester ..	Dog	1895: Nov. 20	1895: Nov. 22	July 14	<i>Manchester Guardian</i> , July 17.
334	Perico, Luigi (13) ...	Seriate, Bergamo, Italy	Dog	1896: Aug. 18	1896: Aug. 19	Sept. 6	[Treated at Turin.] <i>Il Secolo</i> , Milan, September 7, 1896.

RECAPITULATION.

INOCULATED IN PARIS:—

1. Under first formula	41
2. „ intensive treatment	28
3. „ third formula	157
226	

INOCULATED IN RUSSIA:—

1. At Odessa	26
2. At Charkow	9
3. At Moscow	6
4. Elsewhere in Russia	8
49	

INOCULATED AT OTHER CENTRES:—

1. In Italy	55
2. At Rio de Janeiro	1
3. At New York	2
4. At Budapest	1
59	

Total deaths after preventive treatment 334

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 9.]

LONDON, JANUARY 1, 1897.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Committee of the Victoria Street and International Society have received £100, a last donation from the late Miss Mary Charlotte Lloyd, of Hengwrt, one of the original founders of the Society, and for many years a most active member of the Committee.

WE have received with pleasure a copy of Mrs. Caroline Earle White's pamphlet on "Mistaken Enthusiasm," which goes at length to the question of Pasteurism and anti-toxin for diphtheria treatment, and gives a good idea of their general indefensibility.

HUMANITARIANS should not forget that 1896 was the centenary of the inauguration of the humane treatment of the insane. The Retreat at York was opened in 1796 by William Tuke, a member of the Society of Friends—a body always foremost in works of mercy. The Retreat was the first institution in which lunatics were not treated as wild beasts.

IT has often been urged on and by anti-vivisectionists that they should not employ pro-vivisectionist doctors. To carry out this rule, seeing how small is the minority

of medical men who are sound on the question, would be difficult. Everyone will agree, however, that actual vivisectors ought to be rigidly tabooed. We are, therefore, delighted to learn that during the recent Metropolitan campaign against licensing the Chelsea Institute for vivisection, the following pledge was extensively signed:—

"On account of the terrible cruelties perpetrated on living animals in Vivisectional Laboratories and in Pasteur and Preventive Medicine Institutes, I hereby undertake not to employ as Medical Attendant anyone who is licensed to vivisection in any Laboratory whatever.

"Signature,
"Address,"

Fas est et ab hoste doceri. So it gives us great pleasure to read that Dr. R. O. Beard, Professor of Physiology in the University of Minnesota, in his address on the Evolution of Medicine, published in the *Journal of the American Medical Association*, explodes the fable so constantly repeated by our English opponents that the operation of ovariectomy, by which hundreds of women's lives have been saved, was discovered by Sir Spencer Wells, in consequence of experiments performed upon a dozen rabbits. Dr. Beard reminds us that a simple pig-dealer of a German province, "who in 1517 successfully removed the ovaries of his daughter, had little surgical or even veterinary skill to bring to his task, but he deserves recognition nevertheless, as the nameless author of an operation which has become fashionable, to the weal of many and the woe of some, in these latter days of the nineteenth century."

THE upholders of vivisection frequently put forward a claim that an anti-toxin has been discovered by which death from tetanus can be averted. Two recent instances prove the fallacy of this claim. On the first of December an inquest was held at the Lambeth Coroner's Court, on the body of one Lawrence Castle. He was admitted to St. Thomas's Hospital on the 24th of November, suffering from tetanus. The staff of the hospital seem to have had so little faith in the anti-toxin for the malady that they never resorted to the use of it. The unfortunate man ultimately died of tetanus resulting from injury to the thumb of the left hand. Another case is reported in the *Lancet* of December 5th, where a football player named Joseph Powell, succumbed to tetanus following upon an injury to the left leg. Here the "anti-tetanus serum," as it was called, was used, but the man nevertheless died.

DR. BOOBYER, Medical Officer of Health of Nottingham, was the man deputed some short time back to take

a person bitten by a dog to Paris. The dog was not certainly rabid, and the bite, if it was a bite, was a very slight one. The doctor and the patient — Wheat was his name—spent some weeks in Paris, and it is stated that the ratepayers will have to pay the bill. On his return Wheat was taken before the Watch Committee, where he is alleged to have stated "that he had been extremely well treated and well taken care of by the medical officer (Dr. Boobyer.)" He does not seem to have suffered the slightest inconvenience from the bite, and we think our anti-Pasteurian friends in Nottingham were fully justified in the vigorous protest they made against the lavish outlay on so trivial a case.

THE controversy on Listerism in *The Medical Press*, from which we quoted two important letters in our November issue, was continued far into that month in the pages of our contemporary. In a lengthy letter published in the *Press*, Dr. Campbell Black, of Glasgow, made the following very important statement:—

"I have no hesitation in characterizing it [Listerism] as the greatest scientific fraud (with the exception of "Pasteurism," *in re* Hydrophobia) of the nineteenth century." We quite agree. Listerism is discredited, exploded, abandoned, however much its inventor may have tried to rehabilitate it.

In studying the records of experiments in the *Journal of Physiology*, it is necessary to read between the lines a little. For example, in Vol. XX., Nos. 4 and 5, p. 340, we are told that a "rabbit was tracheotomised." That proves that curare was employed. Chloral was given and an anæsthetic administered "when necessary." A nerve was stimulated. "At the end of the longest stimulation (12 hours), the vaso-constrictor apparatus was quite capable of vigorous action" (p. 341). The reference to the anæsthetic "when necessary" proves the experiment to have been painful, but anæsthesia could not have been effectually maintained for 12 hours, and there is no doubt the suffering caused was as severe as it was prolonged, although the curare masked it.

WE deeply regret to record the fact, which was noted in both the leading medical journals of December 12th, that after sinking a little for one or two weeks, the diphtheria mortality in London had again risen high above the normal rate. In the week ending December 5th there were 60 deaths, against 59 and 42 in the two weeks immediately preceding. The average of ten years was exceeded by 10. And yet some of the leaders of the medical profession and of the vivisectioning fraternity met in London on December 7th and talked largely of the Institute of *Preventive Medicine*, and the discovery of the anti-toxins of diphtheria and tetanus having saved thousands of lives.

A CORRESPONDENT writes to inform us that she has been assured that "the discovery of the kidney circulation was owing and entirely due to experiments on living animals, that it could in no other way have been discovered, and that it has led, or will lead, to a cure for kidney disease." This statement is so unscientific that it is difficult to discover what our correspondent's informant really meant. The renal circulation has been investigated by many experimenters, and what we know of it has been due to the investigations of many physiologists. Malpighi's microscopical researches in the seventeenth century were,

perhaps, the most important, as it was he who completed the discovery of the circulation of the blood by tracing the termination of the arteries in the veins.

SOME of the most atrociously cruel experiments on animals in connection with the kidney circulation have been performed at Cambridge, and, as we happen to know, without anæsthetics, as they were admitted publicly to be inapplicable. The chest was opened, the kidneys dissected out by cutting through the loins, the skull opened, the spinal canal exposed, the nerves dissected out, tied, cut and stimulated. Then drugs were injected into the veins to test the effects on the kidney secretion. Here is one of the results of this horrible martyrdom. Brunton and Power found that digitalis diminished or entirely suppressed the secretion of urine in the dog thus mangled. Yet in the human subject digitalis is the most reliable of all drugs for increasing the secretion, when from disease such as dropsy it is greatly diminished! Kidney disease has not been relieved by any vivisectional experiments whatever.

ALBRECHT VON HALLER is called the father of experimental physiology. He was born at Berne in 1708. The *Practitioner* classes him amongst the "heroes of medicine," and says:—"It is remarkable that though he was a vivisectioner on a large scale he could never bring himself to use the knife on the living human body." Very remarkable indeed, but his successors have outgrown all scruples of that sort.

DR. HERBERT HAWKINS, writing in the *Practitioner* for December (p. 628) on the anti-toxin treatment of diphtheria, says:—

"The absolute scientific proof of the utility of this method of treatment can only be forthcoming in the fulness of time . . . the proof, after all, must be based solely on statistics, and it must be confessed that there is abundant room for error."

Not only room, but a remarkable disposition on the part of the bacteriological researchers to occupy it.

THE *Practitioner* for December says (p. 670), that Dr. F. Lueddeckens claims that by the use of cyanate of mercury in diphtheria he has treated eighty-one cases with only one death. This is a success far beyond anything which has been claimed for anti-toxin. It may be that Dr. Lueddeckens's statistics are not more valuable than those of the serum experimenters, but they are at least quite as trustworthy, and we are as much inclined to believe the one set as the other.

DR. SPENCER WATSON, writing to *Public Health* for December, 1896 (p. 107), says:—

"It would be a great boon to those who are watching the progress of bacteriology if we could see some prospect of finality in the conclusions drawn from experiments. At present all seems confusion, and the theories formed this year are almost certain to be exploded or negated in the course of a few years."

Dr. Watson will have to wait a long time ere he sees finality in any form of vivisection, for "confusion now hath made his masterpiece" in the torture chambers of science.

HERE is a remarkable series of experiments reported in the *British Medical Journal* of October 3rd:—

"M. Piotrowska (*Thèse de Genève*, 1896) reports the results of a study of the comparative toxicity of the substances of the

digitalin group according as they are administered hypodermically, intravenously, or by the gastro-intestinal canal. The substances experimented with were different digitalins (Homolle and Quevenne, Nativelle), fluid extract of convallaria, convallamarin, strophanthin, coronillin, and helleborein. The experiments were made on frogs and on certain mammals (rabbits, cats)."

The object of all this was to find out the comparative times in which all these poisons showed their actions on the animals when introduced by the mouth and when introduced some other way. The results were stated with a mathematical preciseness which we have no doubt is the envy of those whose business it is to cure and not to poison human beings.

HERE is a specimen of these conclusions—

"Fluid extract of convallaria is seven times less toxic in frogs when given by the gastro-intestinal canal than when administered hypodermically. Convallamarin in the frog and the rabbit is six times less toxic by the gastro-intestinal canal. . . . In order to determine whether the liver plays a part in attenuating the toxicity of the poison introduced into the gastro-intestinal canal, the author investigated in the frog the modifications which extirpation of the liver produces, and in the rabbit the difference in toxicity of the substance introduced into a peripheral vein (jugular, femoral, auricular), and into a vein of the portal system (mesenteric)."

UNFORTUNATELY, as human beings are not cats or rabbits, neither are rabbits frogs. Whether or not, or to what extent, frogs are human the experimenter does not declare, so we are at a loss how to apply his mathematics after all:—

"The results of the experiments in mammals did not always agree with those on frogs. Frogs from which the liver has been extirpated are six times more sensitive to extract of convallaria, twice more sensitive to coronillin, and eight times more sensitive to helleborein than in the normal state. Frogs in the fasting state are more sensitive to the action of fluid extract of convallaria, coronillin, and helleborein. In the rabbit the liver does not appear to lessen the toxicity of convallamarin or helleborein. Coronillin, on the contrary, is three times less toxic when injected into a mesenteric vein, its toxicity, therefore, seems to be attenuated by the liver."

An experiment of peculiarly painful nature is reported in the Vienna letter of the *Lancet* of November 14th. The great lymph vessel of a dog was tied, obstructing the flow of chyle or elaborated food, which should be poured into the blood stream and carried by the heart to the lungs and the body. After three days the animal died without having presented any "special symptoms." Which means that there were no violent or noticeable effects, such as convulsions, but not that the animal did not suffer:—

"At the last meeting of the Vienna Medical Society Dr. Biedl exhibited the carcass of a dog whose thoracic duct he had ligatured in the neck. The animal died three days after the operation without having presented any special symptoms, but on *post mortem* examination both the thoracic duct and the *receptaculum chyli* were found to be dilated, and in the abdomen there was a white tumour—the pancreas, the greater part of which was changed into a white mass. Dr. Biedl supposed that there had been an engorgement of the lymph with consecutive bursting of the lymph-vessels; but according to Professor Kolisko, who had also seen the case, there was fatty necrosis of the pancreas."

THE following estimate of Pasteur and his pathological work is taken from a lecture by Professor Arnulphy, of Chicago, reported in *The Clinique* of October 15th,

1896. Coming from a professed admirer of the savant it carries all the more weight:—

"Nobody admires Pasteur and his stupendous work more than myself, but truth compels me to say that clinical observation had individualized typhoid fever, glanders, leprosy, tuberculosis, &c., long before bacteriology had isolated the microbes of those affections. The genius of Laennec had established the unity of tuberculosis from the simple data of clinical observation and microscopic anatomy, a conception confirmed by the histological researches of Grancher and Thaon. So that Koch's discovery of the bacillus, itself only the complement of Villemin's work, has really served to give undisputed countenance to old ideas, and to hook upon tuberculosis a few minor and less specified lesions. The clinic has not needed the help of bacteriology to build up the monument of eruptive fevers. The physicians of past centuries had seen through all their phases, and experimentation will add little to our knowledge when it shall have discovered their specific parasite. Even in those instances where bacteriology has surrendered the pathogenic agents into our hands, it has not furnished a logical nosographic basis."

WE have heard of cases of hydrophobia occurring in persons bitten by animals which have lived to prove that they never were rabid, but the *Medical Press* of October 21st invites us to contemplate a new horror. In a letter headed, "Lyssa Humana," the Vienna correspondent of that journal describes a case reported by Bamberger, of that city, in which death from hydrophobia spontaneously developed in the patient, a youth of nineteen, who had not been bitten at all, and had not even been in contact with a rabid animal. Seeing that nothing is known of the real nature of rabies, and that the prevailing opinion that it is only propagated by injection is pure assumption, there is nothing inherently improbable in the case. The symptoms of the disease were absolutely indisputable, but for all that guinea-pigs were inoculated with brain material and died with symptoms of hydrophobia in due course. But, as the correspondent points out, these experiments were useless, since other material has been injected with like results, notably material from human patients affected with nervous diseases. This case is not the only one, according to the same correspondent, in which the disease has developed spontaneously. What a commentary this is on the muzzling-order policy!

MR. SPURGEON called Sir James Simpson—the discoverer of chloroform anæsthesia—"that dear angel of mercy," and added "if you knew ten thousand eloquent men in Scotland I would give them work for the next hundred years—namely, to praise the Lord for sending to us such a man." A French physiologist, however, held that "it was a trivial matter to suffer, and a discoverer whose object was to prevent pain, was of slight interest only." Simpson and Spurgeon were Christian men, and the Frenchman was—a physiologist.

THAT most valuable plant, the *Hamamelis Virginica*, commonly known as "witch hazel," was introduced into medicine by the American Indians. A medical writer on its properties says:—"It is not strange that its virtues became known long since to the Indians, from whom not a little of our botanical and pharmaceutical information would be found to have been derived if we traced it to its source." We wonder that the experimenters have not claimed to have found out its properties in the laboratory. They have never discovered anything so valuable to the physician.

RETURN OF LECTURES AND MEETINGS.

The following is a further return of the lectures and meetings, arranged at the instance of the Victoria Street and International Society, which have taken place as stated below:—

Date.	Speakers.	Place of Meeting.
1896.		
Nov. 1	Mr. R. S. Wood	National Secular Society, Camberwell
" 2	Rev. T. Perkins	Shaftesbury.
" 4	Mr. R. S. Wood	Co-operative Society, Grays.
" 8	Mrs. Chas. Mallet	Ideal Club, Tottenham Court Road.
" 11	Mr. R. S. Wood	Reform Club, Newington.
" 13	Mrs. Chas. Mallet	Women's Progressive Union, Mowbray House.
" 18	Dr. Berdoe	South Place, Finsbury.
" 22	Mrs. Chas. Mallet	Latchmere Baths, Battersea.
" 22	Mr. A. Westcott	Folks Hall, Dalston Lane.
" 23	" "	Jewish Club, Bell Lane, E.
" 24	" "	Independent Labour Party, Marylebone.
" 25	" "	Liberal Club, Dartford.
" 25	Miss Alison Garland	Prestwich.
" 25	Mrs. Chas. Mallet	Higher Broughton, Manchester.
" 25	Dr. Berdoe	Christ Church Men's Club, Clifton.
" 26	Mr. A. Westcott	Social Democratic Federation, Lambeth.
" 28	Mr. A. Westcott	People's Hall, Penge.
" 28	Mr. R. S. Wood	
" 29	Mr. A. Westcott	
" 29	" "	Radical Club, Central Finsbury.
Dec. 1	" "	Labour League, Poplar.
" 2	" "	Radical Club, Boro' of Bethnal Green
" 3	" "	Progressive Club, N. Camberwell.
" 3	Mr. Benj. Bryan	Holy Trinity Church, Hoxton.
" 6	Mr. A. Westcott	Berners Street, Oxford Street.
" 6	" "	Radical Club, N.E. Bethnal Green.
" 6	" "	Working Men's Club, Chiswick.
" 6	" "	Independent Labour Party, N. Paddington.
" 7	" "	Liberal Club, Woolwich.
" 8	" "	Protest Room Notting Hill.
" 9	" "	Gladstone Club, Hackney.
" 10	" "	Tee To Tum Club, Redditch.
" 10	Mrs. Chas. Mallet	Buxton.
" 13	Mr. A. Westcott	Isle of Dogs Progressive Club.
" 13	" "	Independent Labour Party, Hampstead.
" 14	" "	Gladstone Club, N. Brixton.
" 17	Miss Alison Garland	Literary Society, Saltash.
" 17	Lord Coleridge, Q.C.	Town Hall, Kensington.
" 17	Mr. H. Sedgwick Wilde	
" 17	Mr. R. S. Wood	
" 17	Mr. Benj. Bryan	Peckham.
" 18	Mr. A. Westcott	

A NEW DISEASE RESEMBLING RABIES.—Extensive experiments carried out at the Vermont Station of the United States Agricultural Department have revealed a new disease not distinguishable from rabies, and which might prove a peril in this country not only through the importation of live stock, but even of dead meat. According to the "Experimental Station Record" to hand (Vol. 8, Part I.), the disease made its first appearance among cattle in Iowa, and manifested itself "by a persistent chasing of whatever small animals would come near, accompanied by paroxysms of trembling and weakness," the animals at all times (under its effects) being in a weakly state, sometimes amounting to frenzy. Few lesions were discovered by autopsies, engorgement of the blood vessels, especially in the brain, being the main conditions noted. Rabies being suspected, inoculation of brain tissue from animals which died of the disease were made on rabbits and calves. All the inoculated rabbits and the greater number of calves died with unmistakable symptoms of paralytic rabies. Further experiments proved that inoculation of other animals from the brains of affected animals that had died produced the disease in every instance.—*Leeds Mercury*, Dec. 2nd, 1896.

HOME INTELLIGENCE.

LONDON.

On Wednesday evening, December 3rd, by invitation of Mrs. McDouall, Mr. Bryan attended a meeting of the St. Pancras Vegetarian Society at 3, Berners Street, and delivered an address on vivisection. He put in the first place the question, "Is it justifiable?" and gave an outline of some of the evidence from which the question must be answered in the negative. He described the findings of the Royal Commission as to the abuses inseparable from vivisection, the repetitions of experiments without due cause, and the fact that suffering was caused. He also referred to the Act which grew out of the Royal Commission, and illustrated its failure to restrict vivisection by quoting the official figures illustrating its increase. The delusive nature of the plea as to anæsthetics was explained, and the worthlessness of the knowledge gained whether they were or not, owing to the abnormal state of animals under experiment. Reference was also made to the use of animal extracts in treating disease at the present time, to the nastiness of the procedure, and to the fact that in regard to diphtheria the mortality had increased ever since the anti-toxin was introduced in Paris and America, as well as in London. Professor Verworn's opinion that no new experiment was left to be performed on animals was quoted; if that were so, there was nothing new to be discovered, and Mr. Bryan put it that on all grounds, especially those of justice and mercy, animals ought to be freed from this cruel tyranny.

MANCHESTER.

MRS. CHARLES MALLET, of London, delivered an address on "The practice of vivisection and its attendant evils," at a public meeting held in Higher Broughton Wesleyan School, Great Cheetham Street, on the evening of Wednesday, November 25th. The audience numbered about eighty persons. She spoke of the extent to which the anti-vivisection crusade has suffered from such phrases as "The whole of the medical profession is in favour of vivisection," and "It is surely worth while to inflict a little pain on a few rabbits for the sake of saving much pain to humanity." She endeavoured to show how fallacious are the assumptions involved in these phrases, and dilated on the debasing effects of vivisection, a practice against which she appealed to all present to raise their voices.—Mr. HERBERT PHILIPS, who presided, said that while in the United States and elsewhere there had been some activity on this question during the past twelve months, little had been done in this country, perhaps for the reason that events in Armenia had absorbed the attention of the humane public. Still, he was far from saying that things had been in a state of stagnation. Those who were engaged in the movement against vivisection must take their stand on the principle that you might not do evil that good may come, that vivisection was morally wrong, and that whatever gains there might be from its practice were ill-gotten, and therefore sure to work mischief in the long run. The following resolution was proposed by Mr. JOSEPH LLOYD, seconded by the Rev. H. HIRST, and carried unanimously:—"That the practice of vivisection being utterly at variance with every moral code which acknowledges the duty of mercy and justice to the weak and helpless, the most earnest efforts should be made by the friends of the lower animals to secure its total prohibition by the law of the land." A vote of thanks was accorded on the motion of Mr. JOSEPH LLOYD, seconded by Mr. G. FOWLER, M.A.

BRISTOL.

DEBATE AT THE CHRIST CHURCH MEN'S CLUB.

There was a debate on vivisection at the Clifton Men's Club on the evening of the 25th of November, and the *Bristol Mercury*, unhappily not on our side, said, "it was delightful to see how sensibly the question was put before the members of the Club." That "Vivisection under State Restriction is justifiable and of Benefit to the Human Race," was moved by Dr. ROGERS. He contended that men had a right to use animals for their own advantage. He felt that in vivisection the end justified

the means, but was strongly of opinion that its practice should be restricted by law. Nowadays no one but a competent man was allowed to make experiments, and there was an inspector to go round and see that everything was carried out properly." He instanced in support of the benefits of vivisection the circulation of the blood, the antiseptic treatment of wounds, the discovery of anæsthetics, of a treatment for myxœdema, of localization of brain function, etc., and set up the old defence that if vivisection was cruel, so were certain things done in the farmyard, sport, etc.—Mr. T. A. WILLIAMS took the lead in opposition, and in a judicious and effective way appealed to the sense of morality of his auditors. Vivisection was, to his mind, a crime; a crime because it was cruel. He denied that any good results had come of the experiments of vivisectionists. He had the authority of one of the most eminent surgeons in England for that.—At the conclusion of Mr. Williams' speech a discussion was held, in which several warm advocates of each side of the question took part. Amongst those who supported the anti-vivisection contentions was Dr. BERDOE, who, in a speech of half-an-hour's duration, effectively demolished the arguments on which Dr. Rogers had taken his stand. The latter, who said it was the first time he had stood up to defend vivisection, complained that "a distinguished anti-vivisectionist like Dr. Berdoe should have been sent down from London to oppose him." In the result the debate was adjourned to give Dr. Rogers time to prepare his reply. The debate was brought to a conclusion on Wednesday evening, the 9th ult., when Dr. Rogers replied at length, introducing, so we are informed, much new matter, which was not quite fair. Dr. Berdoe was absent, as were also several other friends of our cause who attended on the earlier occasion. It was therefore not surprising that the numbers voting were small (12 to 8), or that the motion in favour of restricted vivisection was carried.

MEETING IN CLIFTON.

A meeting in connection with the Bristol and West of England Anti-Vivisection Society was held on Thursday afternoon, November 26th, at Hamilton's Rooms, Park Street. Captain Nicholletts presided, and in opening the proceedings referred to the debate on the question of vivisection which was held on the previous evening, and remarked that it had been pretty well proved that the circulation of the blood had not been discovered by vivisection.—Miss WOODWARD, hon. secretary of the Church Anti-Vivisection League, then addressed the meeting at some length and moved that the following resolution or petition be sent to Parliament: "That your petitioners are opposed to the practice of vivisection as being an immoral and unmanly abuse of power."—The Rev. H. F. WATSON seconded. He urged upon the meeting the necessity of taking the higher ground in coping with the question. They ought to go simply upon the question whether it was right or wrong. If wrong, it made no difference what benefits might be derived.—The resolution was then put to the meeting and carried.—The Rev. A. C. MACPHERSON proposed a vote of thanks to Miss Woodward, which was carried.

BRISTOL AND SOMERSET FRIENDS' SOCIETY.

On Friday evening, November 27th, a meeting of members of the Society of Friends was held at Woodburn House, Cotham Park, to hear an address by Miss Woodward, hon. secretary of the Church of England Anti-vivisection League, Mr. Joseph Storrs Fry presiding.—The meeting was opened with reading and prayer.—The CHAIRMAN expressed his inability to believe that God had intended the secrets of nature to be discovered by processes opposed to His own laws, and enforced the duty of opposing vivisection for the sake of the animals requiring protection, for our own sakes, and yet more as doing the work of the All-Father. He thought that the question of utility need not trouble the mind opposed to the pursuit of knowledge by unlawful means, and believed that little physical gain had resulted from experiments on living animals.—Miss WOODWARD compared the practice of vivisection to the fatal upas tree, as a far-reaching question which strangled the sense of right and wrong. One point differentiated it from every other sin, because other sins were recognized as such. Under the name of vivisection atrocious cruelties were practised in this country, and for cruelty no greater a labourer had been lately sent to prison for six

months.—Mr. T. A. WILLIAMS said he was not a sentimentalist; for him the life-struggle had been hard and real, but he had made up his mind that this thing was a crime which must and should be attacked and done away with. To accomplish that everyone's heart must be right, and a great deal of influence should be brought to bear in teaching the right treatment of animals to children and young people through Sunday schools and political and social organizations.—Miss MATILDA STURGE alluded to the late Sir B. W. Richardson, and his almost admission of the needlessness of vivisection. There was fashion in science as in other things, and she believed that this terrible fashion bore within it the elements of its own destruction and would surely pass away.—Miss M. PRIESTMAN moved the adoption of a petition to Parliament, which Mrs. MILNER seconded, and it was carried unanimously.

SOUTHPORT.

THE ANTI-VIVISECTION LEAGUE.

Two drawing-room meetings, under the auspices of the local branch of this league, were held in Southport and Birkdale in the week ending November 21st. The first was held on Tuesday afternoon, Mrs. Feugh-Rees presiding; and the other at the residence of the Rev. C. H. and Mrs. Wellbeloved, 10, Walmer Road, Birkdale, on Wednesday, Mrs. H. B. Taylor presiding. At each meeting an admirable address on the vivisection question was read by Miss Edith Scott.

SHAFTESBURY.

The Rev. Thomas Perkins gave a lecture at this place, in connection with the Society, on the 2nd ult. The audience assembled in the Temperance Hall, and Mr. Perkins, in addressing them, described what vivisection is, and quoted the opinion of many eminent medical men to show how cruel, useless, and, in many cases, misleading this method of research is. The public had some very erroneous ideas on the subject, one of them being that the experiments were in this country few in number, whereas last year those admitted averaged twelve a day. Another was that they were always performed while the animal was under the influence of anæsthetics, and therefore suffered no pain, whereas many of them were performed without any such mitigating circumstances. He spoke of the futility of the restrictions at present imposed by the law, and urged his hearers to do what they could to bring about a change beneficial to the animals. Shakespeare, Cowper, Coleridge, Wordsworth, Browning, and Tennyson were quoted to show how strongly the greatest poets were in favour of mercy, and the splendid work of Miss Frances Power Cobbe and the great Lord Shaftesbury for the Cause was alluded to.

MEETING AT BUXTON.

A meeting, held in the Town Hall on Thursday, December 10th, to protest against Vivisection, was well attended, particularly by ladies. Mr. Sugden, of Manchester, presided, and read a letter from the Vicar, the Rev. C. C. Nation, who said he was dead against inflicting torture either on man or animals. The Chairman said it would be well sometimes to consider the relationship in which we stand to the animal kingdom. Their contention was not against the medical profession as a whole, but against that section of it which, though small, was powerful, and went in for vivisection. Physiologists constituted three per cent. of the medical profession.—Mrs. Mallet, of London, delivered an address on "Experiments on living animals and the new slavery."

FOREIGN INTELLIGENCE.

FRANCE.

DEATH OF YET MORE PASTEUR PATIENTS.

La Patrie of the 27th November, announced in a despatch from its correspondent at Decazeville that in July last Marie Cavarroc, twenty-five years of age, a servant residing in the Hamlet of Fau, commune of Saint-Parthenay, was bitten by a mad dog. She was sent off at once to the Pasteur Institute in Paris for treatment. Since her return she had been frequently the victim of nervous attacks, but it was understood that she had been cured so far as any fear of hydrophobia was concerned.

That, however, was not the case, and on the night of the 25th of November, she died of the malady after terrible sufferings.

A patient suffering from rabies was treated last October at the Pasteur Institute at Lille. The dog which inflicted the bite had killed several rats, and then attacked his master, Victor Tibodo, who followed the treatment for a time and then ceased, being seized by intermittent fever contracted at Tonkin. Last Saturday, Tibodo had a violent attack of hydrophobia and then died.—*British Medical Journal*, December 12th, p. 1745.

INDIA.

THE PROPOSED PASTEUR INSTITUTE.

The *Indian Mirror*, referring to this ill-starred project of the aggressive scientists in India, wrote as follows in its issue of November 4th, 1896:—

"Pasteurism is again making a stir in the Punjab. Nearly Rs. 40,000 are said to have been subscribed for founding a Pasteur Institute for experiments. Rumour would have it that His Honor the Lieutenant-Governor has expressed his sympathy with the movement, and that sooner than not the Indian Government itself would give it the weight of its countenance and support. If the alleged activity of the Punjab be a reality, we can scarcely conceive any public movement, when its real purpose is properly understood, to be better calculated to promote ill-will among the different races of the Indian population towards each other, and to make them suspect the motives of the Government itself. Even if Pasteurism had proved itself to be an unqualified success, which we maintain it has not, the importation of the system into India is a danger, fraught with momentous consequences, as regards the peace and tranquillity of the Empire. When we consider Pasteurism in all its aspects, the gravity of the danger appears to us to be so appalling, and the consequences involved by the introduction of the system into India are liable to be so far-reaching in their evil effects, that we cannot but, at this juncture, raise a warning voice to the ruling and the ruled alike."

Again, lower down in the same article we read:—

"It is, indeed, difficult to conceive how the Hindu race, that bears a self-imposed tax in order to relieve the sufferings of an over-ridden horse and an over-burdened bullock, will behold with indifference an incalculable amount of torture, which must necessarily be inflicted to satisfy the demands of Pasteurism. To import such a system into Europe, from one part to another, may be a matter requiring considerations merely of public utility or State convenience. At best, it may be a thing involving, in its remote consequences, the fineness of a people's moral sentiments. It cannot, as it is liable to do in India, directly undermine the attachment of a vast people, or strike at the roots of a Government requiring for its stability the confidence and regard of millions of subject races. The promoters of the movement seem to have forgotten that, to the mind of the majority of Indians the 'sanctity of animal life is a very serious formality'; and to them, no considerations of human knowledge or human science are ever likely to appeal with any appreciable force, when those considerations would demand the sacrifice of a large number of their fellow-creatures And, however 'horribly absurd' the comparison might appear to the European mind, it is an undeniable fact that, to the Hindu, the sanctity of animal life appears as great, and perhaps as unqualified, as that of his fellow-man. That sanctity is so intimately blended with his sense of obligations and religious duties towards the Godhead and his own moral being, that, indeed, a vast and mighty revolution shall have been accomplished before the idea of utilizing the animal creation even for the highest purposes of scientific development and human welfare has been fixed upon his mind."

PROTESTS OF THE PEOPLE.

At a meeting of Jains and other Hindus, held at Chinchpoojy, Bombay, last Sunday afternoon, it was resolved to oppose the propagation of the Pasteur system, and to support the Anti-Vivisection Society, founded by the Hon. Mr. Javerilal U. Yajnik, Dr. Bhalchandra Krishna, and Mr. D. Gostling.—*Indian Mirror*, Oct. 31st, 1896.

A meeting of the citizens of Surat was held on the evening of November 7th, 1896, in the Vithalvadi, to protest against

the proposed Pasteur Institute. The Nagarsheth of Surat was called to the chair. Many speakers spoke vehemently against the establishment of the Pasteur Institute in India. They thought it a very unwise and impolitic step on the part of the Government to lend its support to an Institution which was, in the opinion of learned men in England, Germany, and America, destined to failure. It was considered by one and all to be altogether improper for a poor country like India to take upon itself the establishment of this Institution, when Pasteur himself and his followers were compelled to admit that their remedy was not a complete success. Laying aside the economical point of view, its establishment would seriously wound the well-known religious feelings of the people of India, and was therefore likely to produce most undesirable results. Upon these and other considerations, the following resolutions were unanimously adopted:—(1) That the citizens of Surat assembled in this meeting are extremely sorry to learn of the recent movement to establish the Pasteur Institute in India. (2) That the chairman be authorised to forward their humble protest to the Government against the establishment of the said institution in India, and against any pecuniary assistance being given from the people's treasury. (3) That this meeting has its hearty co-operation with the Bombay Anti-Vivisection Society and resolves to sincerely aid it in every possible way. (4) That, in order to carry out the object of this meeting and to raise a necessary fund a managing committee be appointed. The usual proposal of thanks to the President and the owner of the building brought the proceedings to a close.—*Times of India*, Nov. 10th, 1896.

The *Times of India* (Bombay) of November 26th reports that a public meeting, attended by 3,000 people, was held at Ahmedabad on the 15th, to protest against the establishment of a Pasteur Institute in India. The Hon. Mr. Runchodlal presided. Dr. Pitamberdas proposed the resolution of protest, which was carried; as were also a second resolution protesting that such an Institute would outrage the religious sentiments and feelings of the people of India; and a third and fourth forming Committee, &c.

PUBLIC MEETING AT KENSINGTON. SPEECH OF LORD COLERIDGE.

On the 17th December a meeting was held at the Kensington Town Hall "to protest against animal torture in the name of science at Chelsea and elsewhere." The Right Honourable Lord Coleridge, Q.C., presided, and there was a large and influential audience.

LORD COLERIDGE: Ladies and gentlemen—It is usual on these occasions for the chairman to make a few introductory remarks explanatory of the objects of the meeting. I think the object of our meeting to-night is two-fold. We are met to-night to express our general abhorrence of the torture of living animals, under whatever excuse that torture is perpetrated; and we are also met with the particular object of preventing the establishment in our neighbourhood of an institution which shall be at all, and which will, if we do not prevent it, be mainly, devoted to the practices which we condemn.

Now, I am a lawyer, and perhaps you would like to know something of the law on this subject. By law, if you treat any animal which is a domestic animal cruelly, you are liable to be imprisoned or to be fined, for you have offended against the laws, and will be properly punished for offending against the laws of your country. But, if you allege as an excuse for the cruelty which you perpetrate that you perpetrate that cruelty in the name of science, the law excuses the cruelty which you perpetrate. Ladies and gentlemen, that distinction—and, remember, it matters not one farthing to the animal whether the cruelty is perpetrated in the name of science, or perpetrated out of mere thoughtlessness or wantonness—that distinction we wish entirely to do away with. (Cheers.)

Many persons will tell you that under the law as it stands very little, if any, cruelty can be practised, because they will tell you that a license has to be obtained upon certain recommendations from the Home Secretary, and that it is only those persons who hold such licenses who are able, even in the name of science, to perpetrate these cruelties. Let me say this at once: that I have never yet heard of an instance of any

license having been refused; and therefore the protection which exists in a license being necessary is no protection at all. In the next place I only desire to point this out to you: if any persons try to lull your feelings by desiring you to look at the Inspector's Annual Reports, I can only tell you that those reports are a tissue of absurdities. In the first place, the reports are founded upon the statements of vivisectioners themselves. If you were to have, say, the reports upon which the grants to your public schools depended drawn up, not by independent inspectors, but by the Boards or the teachers of the Boards themselves, you would know what value to attach to such reports. If a person is called upon to report upon his own conduct, it is only natural to suppose that that conduct will appear to him in the most brilliant colours; and if it is suggested that these learned men of science could possibly be thinking of anything but humanity and kindness towards the creatures placed at their mercy, I am sure any such men of science would repudiate the insinuation with scorn. Therefore, ladies and gentlemen, the reports of the inspectors are a tissue of absurdities, and in my judgment, in the fact that they lull the public conscience, they are an evil rather than a good. (Applause.)

Now one thing more. Many persons who have friends in the medical world tell you that the only object which these learned gentlemen have in practising these cruelties upon dumb animals is, the sacred cause of humanity. You know the horrors of the French Revolution were all perpetrated in the sacred name of liberty, and I think that, although the sacred name of liberty has a good many sins to answer for, the sacred name of humanity has even greater sins to its debit. (Cheers.) Gentlemen, there never was greater nonsense talked than all this rubbish about the sacred name of science. "The sacred name of science," reduced to its common elements, means the individual fame of the scientific man. (Hear, hear.) These learned gentlemen, it is said, are merely anxious for the good of humanity, but did you ever know, or ever hear of anybody who ever did know, of any scientific man perpetrating these cruelties in the sacred name of humanity and science and publishing useful results to the world anonymously? (laughter). Why, the real thing is, they desire—and I do not blame them for it if they only effect their desire by legitimate means—they only desire their own fame and success in the scientific world in which they live; if their fame and success are in their opinion bound up with useful discoveries, they are no doubt the more pleased, but the first object they have in view is to stand well in the great profession, as it no doubt is, to which they belong. Now, ladies and gentlemen, we wish as well to humanity and as well to science as any of these gentlemen who talk with this frothy-mouthed eloquence about "science" and "humanity." We are met with arguments which show, and in most cases the tone in which they are put forward shows, that the men who defend these practices are either angry or secretive. If a man in defending his case gets angry, I know that he has some suspicion as to the worth of the case which he defends; and if a man in an argument or in developing his case is secretive, I know that there is something of which he is ashamed; and, inasmuch as there is a great secrecy observed with regard to these practices, and, inasmuch as when we attack them we are met with great violence of language and great heat of argument, I am not disturbed, but from these facts I catch the happy presage that those concerned in this case feel that the judgment of right-thinking men is against them. (Cheers.)

So much, ladies and gentlemen, for a few general remarks. I must now come to particulars. The primary object of this meeting is to prevent the establishment in Chelsea of an institution of which the name is given as "The British Institute of Preventive Medicine." Now, as to the word "British," of course we all like it; the word "Institute" is applied to the most admirable undertakings; "Preventive," so far as disease is concerned, appeals to us all, because we are all anxious to prevent disease; and "Medicine" stands high in the estimation of us all. But in these innocent words "British Institute of Preventive Medicine," would anybody dream that the real meaning is a place at which shall be carried on the torture of live animals under the prostituted name of science! (Cheers.) Now we wish to prevent this. We feel that in the very description which these people give

of the Institution which they are setting up, in this secretiveness to which I have alluded, they show that they feel that public opinion is against them. (Cheers.) They know very well that if they were to write up over their doors "Vivisection Laboratory for Chelsea," there would be an outcry against it, and they clothe these horrors under the euphemism of "The British Institute of Preventive Medicine." (Hear, hear.)

Ladies and gentlemen, cruelty, even indifference to cruelty, is a childish, not a manly, instinct. There are some things of which the longer the world lives the more it will be convinced; and one of those is that manliness and humanity are one and the same. (Cheers.) I remember once being in the presence of Lord Shaftesbury—a very old friend of this Cause, and whose name should be honoured at any gathering of those who sympathize with it—(cheers)—and a man of infinite charity towards all men. In a private conversation, when someone was detailing to him the horrors which were going on in a particular institution in London, Lord Shaftesbury rose from his chair, and he clasped his hand and said, "By God, I could hang him with this hand." I say that that will be the feeling of every man who has experience of this crime of vivisection; the more he looks at it, the more he enters into it, the more he reads about it, the more he knows about the horrors that go on around us. Gentlemen, we are apt in our easy luxury to become more or less wrapped up in our own comforts, our own treasures, our own surroundings. Let it not be said that in this, one of the richest parts of the richest town of the richest country in the world, we were self-consciously indifferent to the feelings and the duties which ought to actuate us towards those humbler, those voteless, those voiceless animals which God has committed to our care. (Cheers.)

Mr. H. SEDGWICK WILDE moved, "That this meeting indignantly protests against the continual increase of vivisection under the operation of a so-called restrictive law, against the registering of more vivisectional laboratories at Chelsea or elsewhere; and against the reputation of the United Kingdom being stained with the cruelties constantly perpetrated in the mis-used name of science; also, that a memorial to this effect be adopted and signed by the Chairman on behalf of the meeting, and presented to the Home Secretary." In a very eloquent speech, Mr. Wilde quoted from the published statements of vivisectioners to prove that their experiments did involve pain and torture to animals, and were after all productive of no scientific result. That such cruelties could exist in a Christian country could only be due to ignorance on the part of the public. What was required was to inform the people of the true state of facts, and this disgraceful sin would soon be swept from our midst. (Cheers.)

Mr. R. SOMERVILLE WOOD, M.A., in seconding the resolution, took up a number of the stock arguments of vivisectionists, and, dealing with them in detail, showed that since the passing of the Act there had been an increase in these experiments, that the provision as to inspection afforded no satisfactory safeguard against cruelty, that the experiments indisputably involved suffering to animals, and that not a single fact or deduction had been scientifically proved by the practice of vivisection. (Cheers.)

The CHAIRMAN having invited discussion, a Mrs. GREENWOOD undertook to defend the cause of vivisection. A vigorous speech from this lady from the pro-vivisection side, was considerably discounted when it was followed by an address from her husband, a medical man, who expressed the view that the alleviation of physical suffering might be bought at the expense of great moral injury, and said that he considered that even as a scientific man he was not entitled to neglect the moral aspect of the question.

Mr. BENJAMIN BRYAN, secretary of the Victoria Street Society, followed with a speech in which he replied to Mrs. Greenwood's assertions, and showed that the vivisectionists had totally failed to produce proof of a beneficial result from many of their experiments.

The resolution was then put and carried with only one or two dissentients.

The Rev. THOS. PERKINS moved, the Rev. LIONEL S. LEWIS seconded, and Mr. R. NIVEN supported a vote of thanks to the Chairman, which was carried by acclamation, and the proceedings terminated.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, FRIDAY, JANUARY 1st, 1897.

VIVISECTION AND CANCER.

A FEW years ago a great stir was made in medical circles by the discovery of what was supposed to be the microbe of cancer. Enthusiastic researchers were so sure of their prey that there seemed to be little else left than to cultivate the microbe, prepare a virus, and by a process of inoculation banish cancer from the face of the earth. Unfortunately there were little differences among the researchers themselves. Some of these scientific gentlemen failed to discover the supposed microbe in the specimens of their brethren. So keen were the disputes between some of the contending parties that committees had to be appointed to pass judgment on microscopical slides.

Another unfortunate circumstance was that whilst there are many different kinds of cancer there were not as many different microbes to account for them. And further, this particular form of microbe, called a "Psorosperm," is found in greatest abundance in the livers of rabbits, which, though diseased, are certainly not cancerous. So, after a time, the Psorosperm of cancer became somewhat discredited, and we had supposed that animals were having a respite from experiments with cancerous material. The Brown Institution Lectures, however, as we noted last month, reveal the fact that under the administration of the new Professor Superintendent, Dr. J. ROSE BRADFORD, investigations on cancer have been proceeding in the laboratories of the Institution. It does not appear that anything in the way of a cure has been forthcoming. The latest experiments have not tended to check the advancing cancer death-rate any more than the older ones, in which cancer material taken from animals was grafted into other animals of the same and different species; or those other experiments in which German surgeons, whilst excising cancer from one breast of certain hospital patients inoculated it into the other.

In spite of all the Faculty have done, the returns of the REGISTRAR-GENERAL show a steady increase in cancer mortality. The Report for 1895 (page xvi.) says:—"For many years prior to 1892 there has been a progressive increase in mortality from cancer. . . . In

1893 the rate . . . was higher than in any previous year on record." But the year 1894 (the last year as yet returned) showed a still higher mortality. Here is the table for the four years ending 1894:—

CANCER MORTALITY.			
Year.	Total Deaths from Cancer in Year.		Rate per Million.
1891	...	20,117	692
1892	...	20,352	690
1893	...	21,135	711
1894	...	21,422	713

Truly an appalling state of affairs! If this is all the result the vivisectional school of therapeutists can show for their labours it is time people's thoughts were turned in some other direction for their salvation from death by cancer.

In the meantime it almost seems as if the fell disease had decided to "tak' a tho'ght an' mend" without any assistance from microbe-hunters and disease inoculators. In the *Medical Press* of December 2nd, in the proceedings of the Clinical Society of London, Mr. PEARCE GOULD related the case of a woman, aged forty-three, who, after undergoing three successive operations for cancer, came into the Middlesex Hospital apparently to die. So widespread were the cancerous deposits that no surgeon would undertake a further operation. "She was then thought to be in the last stage of malignant disease." That was in March, 1896. However, she did not die; on the contrary all the cancer deposits disappeared "spontaneously," as the Faculty describe it, though the word must not be accepted as an explanation.

In the course of the discussion on the paper, Mr. JOB COLLINS made a very pertinent remark. "He observed that *as long as the pathology of cancer remained so much a matter of doubt* they must not be surprised if cases of this kind occurred." Remarking, by the way, that Mr. COLLINS evidently does not think that much knowledge has been derived from the work of the cancer experimenters, we may venture to suggest that it would be a much more humane and profitable proceeding if medical men were to follow up cases of this kind, and fathom the principle on which the cures have occurred. For several other speakers instanced cases of undoubted cancer in which cure had taken place, some under one drug, some under another. If cures do take place, as these authorities aver, then cancer is not the incurable disease which the Faculty have hitherto pronounced it. The cures we are told are "spontaneous." In other words, the tumours make up their minds to go, and they go. This is not a very philosophical kind of pathology unless it has been proved that the morbid growths possess independent minds of their own to make up. But we do not expect the experimenting school to be either logical or philosophical, and if it serves to blind the learned profession to its own ignorance, it probably does all that is wanted. Perhaps the scientific imagination pictures to itself a kind of suicidal action on the part of the psorosperms. Be that as it may, the vivisectionists cannot claim that they have discovered the art of persuading them to do it.

THINGS NEW AND OLD.

THE past few months have been noteworthy in the annals of our crusade by reason of the increased efforts of our opponents to discover new arguments and bring forward fresh and startling illustrations of the value of vivisection in place of those which have done duty so long. It was time. "Harvey and the circulation," "the Antiseptic treatment," and the absurd legends about the uses of drugs, have earned the right to a retiring pension, and should be relegated to the limbo of forgotten things. But just as old superstitions linger among the ignorant for ages after the learned have exploded them, so do the delusions about operations and the effects of drugs cling to the less liberally educated members of the medical profession, while specialists and experts have cast them off. Just as a little learning tends to Atheism, as Lord BACON points out, and a profounder knowledge leads to faith in God, so do an imperfect acquaintance with medical history and a superficial knowledge of the sciences accessory to medicine tend to make doctors believe that experiments upon animals are the foundation of scientific practice. They are told this in books written by vivisectionists, and they believe it in the absence of sufficient information to detect the error. A stump orator in the streets lecturing against religion goes far beyond anything that a HUXLEY or a HERBERT SPENCER would assert, and the crowd yields assent to propositions whose only claim to belief is the vehemence with which they are urged. It is just the same with our question. A lady physician, debating with our friends the other day, made the astounding assertion that all our knowledge of poisons had been acquired by testing their effects upon animals. She promptly received a lesson in toxicology which must have proved a revelation to her. No pharmacologist would have dared to maintain her thesis, but certain persons have a habit of entering in where beings of a higher order fear to tread. Ignorance gives such confidence. MARK TWAIN once proposed to give a lecture on chemistry at the Royal Society, declaring that as he knew nothing whatever of the subject he should be able to speak upon it with the greater confidence. What the American humourist thus satirised would seem to be the animating spirit of many of our medical and other opponents.

We have lately had many proofs of this. Here, for example, is a well-known physician, who writes to the papers to say that the operation for removal of the spleen had never been performed till somebody experimented upon a dog under chloroform and proved that the organ is not essential to life. But the operation is described in the Talmud, and Rabbinical surgeons proved its safety two hundred years before Christ. It has for hundreds of years been supposed to improve the wind, and was practised on the Texan runners for that reason. In the year 1700 a class of surgeons sprang into existence as experts in the matter, and they named the operation "unmilting," the "milt" being the common name of the spleen. It was successfully performed

for disease of the organ by ZUCCARELLI, in 1549. All this is common history, and should be as well known to our opponents as to us. Professor TREVES, in his great "System of Surgery," says, "If the after history of the cases of splenectomy be inquired into it will probably be made evident that—in its ultimate results—the operation is not so successful as has been assumed."

The same doctor who advanced the above claim for vivisection fell into a still graver error when he went on to declare that, as a result of animal experimentation, the operation for the removal of impacted gall-stone has now become practicable and successful. Nothing could have been adduced more unfortunate for the vivisectionists than such an example. The operation in question was first practised in 1733, by the French surgeon PETIT, who, as Mr. GREIG SMITH says in his "Abdominal Surgery" (Vol. II., p. 994), founded the surgery of the gall bladder, which, strange to say, was totally neglected by English surgeons till ten years ago. Dr. COOPER ROSE, writing to the *Hampstead and Highgate Express*, December 5th, said:—

"Many years ago a most lovely and highly accomplished girl died under my care from an impacted gall-stone. I discussed the matter with the Pathological Society, and suggested the reasonable possibility, in future cases, of an operation for removal of the stone. The suggestion was received and regarded as perfectly Utopian, but since that period, as the result of vivisection, many valuable lives have been saved by the operation then suggested."

Utopian! when at least a hundred and thirty years previously the operation had been described by PETIT exactly as it is performed to-day. The result of vivisection! The vivisectionists were 150 years too late. It is remarkable that this operation is the speciality of Mr LAWSON TAIT, who in the pages of the *Edinburgh Medical Journal* (Vol. 35, pt. 1., p. 305) says:—

"I say without wincing, the ghastly experiments made upon dogs' livers and gall bladders, experiments as futile as the calculations of the astrologer and as hindersome of real advance as the anti-Copernican system of astronomy. Seeing the poor dogs die almost invariably after operations of the kind spoken of, and seeing conclusions derived from the experiments which were directly opposed to every day clinical experience, it did not dawn upon me for years that Bennett was all wrong, that his vivisection was not only useless, but, and this was far worse, misleading and obstructive. If we had read the teachings of the matter, and had looked at the experiments in Nature's own laboratory—disease; had we taken the conclusions of the experiments as they stared us in the face, we should have been at least a century in advance of our present position."

In vain did JEAN LOUIS PETIT fully describe this operation of cholecystotomy; his brilliant conception must lie hidden for a century and a half, till the vivisectionists could sacrifice their hecatombs of dogs, and conclude that it might be tried on the human subject. Dr. ROSE's patient was the victim of the pathological laboratory and our insular prejudice.

Another and more specious attempt to discover a blessing in vivisection is the assertion that is made in some quarters that our knowledge of the cause of locomotor-ataxy, a spinal disease affecting the gait, has been gained by animal experimentation. It was long taught that degeneration of the posterior columns of the

spinal cord is the chief, if not the only, morbid process in the disease. Experimental injury to this portion of an animal's anatomy may produce something akin to the disorder, and for years the vivisectors concluded they had settled the question. But all they did was to prove how widely an experimental disease differs from "Nature's own laboratory, disease," as Mr. TAIT so aptly terms it. "The disorder is now known to be a general disease of the nervous system, affecting both central and peripheral portions, though mainly limited to sensory or afferent structures."—(Dr. F. X. DERCUM, "Text Book of Nervous Diseases," 1895, p. 640). It was not vivisection but the microscope which gave us this knowledge. The vivisector was a false guide who took us but half way and deserted us just when we needed help the most.

In face of the constant and emphatic protest that the "Thyroid extract cure for myxœdema" is another gift from the physiological laboratory, it is instructive to find in Mr. VICTOR HORSLEY's address on the pathology of the thyroid gland, the candid admission concerning "the brilliant discovery of Dr. GEORGE MURRAY that the terrible and fatal symptoms which, chiefly by the *clinical* researches of Dr. ORD, we are all so familiar with, can be dissipated by the internal administration of that structure the loss of which had caused the disease." (*British Medical Journal*, December 5th, 1896, p. 1,623.) We leave our readers to judge whether the vivisectors' new examples are likely to do their cause more good than their old and superannuated illustrations of laboratory boons and blessings to men.

A "NASTY THEORY."—Physiologists have some nasty theories. The semi-human animals described by Mr. Wells, the novelist, are only one step ahead of actuality. By careful selection and grafting animals were transformed almost into the likeness of human beings. Physiologists do not broach theories so repulsive as this, though they are next door to it. A well-known physician has come forward with a proposal that human beings, for the benefit of the fittest, should turn vampires. In cases of purely senile decay, he says that death, if not absolutely conquered, could be long postponed by grafting a young, healthy person on to an old and valuable one. It would involve a temporary connection at the wrists. The development of old-age conditions would be immediately arrested by the flow of young blood, and after a time there would in the old man be an impetus of youthful vigour. The younger person would, of course, be correspondingly devitalised. The advocate of this plan is a vivisectionist. He has tried it on the dog. The animal, he says, was completely rejuvenated, and when its vigour wears off it will only need fresh stoking up in order to obtain a new lease of life. The vivisectionist suggests that we now have a scientific method of keeping alive the salt of the earth, our great thinkers, statesmen, artists, and the like. He believes that there would be no difficulty in securing young men willing to be devitalised. But, on the other hand, he evades an obvious rejoinder. Life is not pleasant enough to wish for any extension of it. There comes a time when even our greatest and best begin to look forward to their long repose.—*Eastern Daily Press* (Norwich), Nov. 25th.

THE RABIES SCARE.—It will be learnt with satisfaction, quite apart from the prospect it opens up of an early revocation of the much criticised muzzling order, that the epidemic of rabies seems to have been nearly stamped out. One case was reported to the Board of Agriculture as having occurred in Surrey last week, but from every other county in England and Scotland there was a clean bill of health.—*Daily Telegraph*, December 17th, 1896.

THE CHESTER CURATE AGAIN.

The Rev. F. Screeton having written a further letter to the *Chester Chronicle*, Mr. Bryan replied in the issue of that journal for the 28th of November in the following terms:—

TO THE EDITOR OF THE "CHRONICLE."

"Sir,—So far as correspondence is concerned I consign 'Anti-Vivisection,' with its frequently misplaced sentiment, to that region of obscurity and forgetfulness which is its most fitting and deserved place of abode." This, if it were not impotent, would be magnificent. I find by the usual authorities that Mr. Screeton is a priest; but he is not the Pope of a servile world, and therefore this bull of his is null and void. There is too much light, too much freedom, aye, too much of the spirit of his Master, Christ, who said, "Blessed are the merciful, for they shall obtain mercy," in the world for him to be able to stifle the plea for mercy and justice to God's tormented creatures. He can retire, he may not be missed; but to suppose that a cause of truth and right such as the cause of anti-vivisection is, can be settled by the wave of a curate's hand is little less than infatuation.

Now, sir, to the facts. Mr. Screeton is mistaken in alleging that I found myself compelled to admit that physiology and medical science owe much to vivisection. On the contrary, I said it was an error to say that in regard to medical science. My opponent was therefore lacking in fairness. He supposes the evidences I put in were some stock quotations. As a matter of fact, I have used them only once before, and I have not seen that they have been used by anyone else. But if they had been stock quotations, yet, nevertheless, would that have vitiated them? If so, what about the text of Mr. Screeton's sermon on Hospital Sunday? Can it be supposed that it had not been used hundreds of times before? The first three lines of my first quotation are enough for me, coming as they did from the lips of a man who for a long series of years has been a persistent vivisectionist. "It is customary to say that medicine is applied physiology, and it would be very desirable if we could honestly say that this was the case." He was addressing an assembly of his medical brethren, and he included them as not being able honestly to say that medicine is applied physiology. Obviously he meant that they all believed that it was not. There was no dissent expressed to his view. Where then, I ask, does vivisection come into the practice of medicine?

The other two extracts are equally strong, if Mr. Screeton had seen the drift of them, and none of them was from an anti-vivisectionist. As to the majority of the medical profession being satisfied as to the usefulness of these experiments, I doubt it. They may uphold them as a matter of faith, but their usefulness is quite another thing. Then says Mr. Screeton, "If any interested in this question are in doubt, they need only ask the first doctor they meet." Which is as much as to say, "If any interested in the question as to whether the Church of Rome is the only true Church are in doubt, let them ask the first Roman Catholic priest they meet." Would the answer in such a case satisfy Mr. Screeton? Of course not. No more will the doctor's answer satisfy us. It is a question to be decided by evidence, and by that test vivisection is condemned on utilitarian as well as on moral grounds. Your correspondent is quite at sea when he says, "Many operations now performed on human beings, and the use of many drugs, must first of all have been tried by way of experiment on animals." This statement must have been evolved out of his own inner consciousness, at least as to operations. Can anyone imagine an operation on the thin leg of a dog, for instance, as an example of a similar operation on a man? As a matter of fact, this idea is so absurd that the medical profession consented to a clause being inserted in the Act on vivisection now in force altogether forbidding operations on animals with the view of attaining manual dexterity. As to drugs, Dr. Berdoo, who addressed a letter to you a few weeks ago, has written a book, in which it is conclusively shown that experiments with a view to their administration to mankind are not only futile, but dangerous, many plants and substances poisonous to man being taken by animals with impunity. As to sport, I am not in favour of any wanton cruelty, but the anti-vivisection question is so wide and far-reaching that I am obliged to confine myself to that, leaving it to others to do

other work—as they do. I certainly said that there is divine sanction for the killing of animals for food, and my opponent does not deny the fact. But he insinuates that portions of the canonical scriptures—to which, I suppose, he, as a clergyman, has subscribed—dealing with quite another matter, are of questionable authority. It is an old device when arguing in favour of one wrong to set up the plea that something else is as bad; but it is quite as cogent an argument on the other side to repeat the statement that two wrongs do not make one right.

Mr. Screeton must have his adjectives, it seems. So now he speaks of “mawkish sentiment.” I do not notice, however, that in the mutilated excerpts from his sermon of the only two instances in which he used the word “sentiment,” that he has brought forward the word “frothy,” which appeared in your report of the sermon. This is hardly sincere, especially as he does not affirm that your report is incorrect. The right meaning of the word “sentiment” is only material so far as showing that many inspirations of the human mind far removed from anti-vivisection may be rightly described as sentimental. Some sentiments may be “mawkish,” some even “frothy,” but I am of opinion that the preacher should avoid such terms, which become the platform rather than the pulpit; but if any preacher should use them, and then abstain from defending them, it is a sign of weakness which is derogatory to his reputation and his cloth. For myself, I regret that the discussion in your columns is to close, but this is certain, that, speaking generally, the controversy over the cruelties of vivisection will never be concluded till justice triumphs and right is done.—Your obedient servant,

BENJAMIN BRYAN,
Secretary Society for the Protection of
Animals from Vivisection.

20, Victoria Street, London, S.W., Nov. 24th, 1896.

THE CHELSEA INSTITUTE.

The following memorial, with 11,005 signatures, obtained from all parts of Great Britain, principally through the media of the Society's branches and allied Societies, was presented to the Secretary of State for the Home Department on the 28th of November last:—

To the Right Hon. Sir Matthew White-Ridley, Bart., M.P., Her Majesty's Principal Secretary of State for the Home Department.

SIR,—

The Humble Petition of the undersigned inhabitants of Great Britain,

SHEWETH,

That whereas a building has for some time been in course of erection in the Metropolis, on the borders of Pimlico and Chelsea, to be called the British Institute of Preventive Medicine;

And whereas the said building is approaching completion, and your Petitioners have reason to believe that an application may be made to you to register it as a place for Vivisection;

And whereas your Petitioners have strong conscientious objections to the practice of Vivisection, and are of opinion that too many facilities are already provided for it in London;

Now, therefore, they earnestly beseech you that, should your sanction be sought to the carrying on of Vivisection in the new Institute, you may, in the exercise of your discretion, be moved to withhold the same.

And your Petitioners will ever pray, etc.

On the same date a further memorial, to the like effect, but with slightly varied wording, bearing 1,240 signatures, principally from Chelsea and the surrounding district, was also sent in. The following official acknowledgment of the two petitions was duly received:—

“Whitehall, 8th December, 1896.

“SIR,—With reference to your letter of the 27th ultimo, forwarding two memorials against the registration of the

British Institute of Preventive Medicine, Chelsea, under the Act 39 and 40 Vic. cap. 77, I am directed by the Secretary of State to inform you that application has not yet been received for the registration of the building in question; but that if such an application is received, the Secretary of State will most carefully consider the representations which have been made.

“I am, Sir, your obedient servant,

“HENRY CUNYNGHAME.

“The Secretary to the Victoria Street Society for the Protection of Animals from Vivisection, 20, Victoria Street, S.W.”

Appended are some of the principal names attached to the petitions:—

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The *Daily Chronicle*, of November 21st, announced that the Home Secretary had directed the following letter to be sent to Mr. F. Longman, hon. sec. to the South-Western Anti-Vivisection League, in reply to a petition signed by persons representing half a million working men, praying that, in accordance with resolutions passed at a mass meeting held at Pimlico, a license for conducting experiments should not be granted to the Pasteur Institute:—

"November 19th.

"SIR,—I have laid before the Secretary of State your letter of the 13th inst., asking him to receive a deputation to place before him their views with regard to the registration for experiments on living animals of the new buildings of the British Institute of Preventive Medicine at Chelsea. The Secretary of State directs me to acquaint you that he has not yet received any application for the registration of the buildings in question, and to refer you to the reply given by him to a deputation which he received on July 24th last. In view of the expression of opinion then given he does not think it necessary to receive another deputation on the subject.—I am, Sir, your obedient servant,

"HENRY CUNYNGHAME."

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 FOR THE PROTECTION OF ANIMALS FROM VIVISECTION
 UNITED WITH THE
International Association
 FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 10.]

LONDON, FEBRUARY 1, 1897.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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“SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION.”—MR. LAWSON TAIT, in a letter in “*The Times*,” November 8th, 1892.

NOTES AND NOTICES.

THE election of direct representatives by the profession on the General Medical Council terminated in the second week of December. Drs. Rentoul, Brown, and Glover were returned. Of three candidates championed by Mr. Victor Horsley only one was successful.

WE had hoped that the rabies scare, which has hitherto affected the officials of the Board of Agriculture more than the public, was about to terminate. A case which appeared in the daily press on the 10th ult., however, will tend to prolong it, we fear. A dog behaving savagely at Chislehurst, and which bit two persons, was well advertised, as usual, by the sub-editorial lovers of sensational stories, as rabid. The *Daily Telegraph* revealed the fact that the Chief Commissioner of Police was so affected that he despatched two patients to the Pasteur Institute in Paris. All this is very unfortunate and very deplorable.

It is astounding how little some wealthy people know

as to making the best use of their money. On the turn of the year it was announced that Baroness Hirsch had offered a sum equal to £80,000 sterling to the Pasteur Institute. Of course it is needless to explain to anti-vivisectionists what it means; more torture of animals, more gratifying of scientific curiosity at the cost of enormous suffering. The Pasteur Institute, already wealthy, will soon have more money than it will know what to do with. The Baroness Hirsch was seriously remonstrated with by telegraph as soon as the news was made known, and afterwards by letter. As there is ground for believing, however, that she is a pronounced pro-vivisectionist, it is not surprising that no answer was vouchsafed.

OUR important ally, the editor of *To-day*, commenting on this eccentric exhibition of generosity, on January 9th, remarked:—

The Pasteur Institute at Paris is to receive a gift of eighty thousand pounds out of the estate of the late Baron Hirsch. (By what means the money was originally acquired it were kinder, perhaps, not to inquire too closely.) It is to be ill-spent, in the advocacy of cruelty, and in the encouragement of cowardice. Dr. Roux says the money will be used for the full equipment of a laboratory of biological chemistry. “In this establishment Pasteur's successors will be enabled to make minute research, entailing long labour.” One can guess the hell of ghastly torture, therefore, that will be built by this gold. “In the Pasteur Institute,” concludes Dr. Roux, “we are perpetually carrying out a struggle against death.” I quote these words because they show the folly of the whole scheme. One would think, to hear these Pasteurites speak, that they really hoped to abolish death. They seem to forget that death is immortal. All they are accomplishing by their hideous antics is the decrease of the fear of death among mankind.

THE revolt of students, members of Professor Rutherford's class, against that person's treatment of animals under vivisection is a very hopeful sign for our cause. With the average youth, sent to the Edinburgh University to work and be trained for a medical degree, there must be a natural revulsion on first seeing an animal experimented on; the spirit of compassion, of manliness, must rise against the abuse. Well, indeed, is it that some of these young men should rebel against the attempt to kill down in them the emotion of pity. As will be seen from our Home Intelligence some young men have done this. All honour to them for their courage, and may their example be imitated elsewhere. It is an additional dishonour to the vivisectionists that they should seek to reduce the minds of youthful students of medicine to a condition of callousness to animal suffering equal to that of their own.

MR. TEBB, in his terrible book on “Premature Burial,” quotes from Dr. Brouardel, of Paris, the record of an

experiment on a dog which exhibits, in a typical manner, the combination of merciless cruelty and stupid folly which seems to constitute the characteristic mind of the vivisector.

"A dog," says Dr. Brouardel, in his work, "*La Mort Subite*," "placed in a common coffin lived five or six hours. But a dog occupies less room than a man who, in such a coffin would not have more than one hundred litres (of air), so he would possibly live twenty minutes."

Everyone in the least degree familiar with the habits of dogs knows that they live comfortably, for whole nights, covered under thick bed-clothes where they can have so little air that a child in the same place would be stifled in half-an-hour. Yet for the sake of making a sort of rule-of-three sum—"If a dog live so many hours in such a condition, how long will a man live?"—this solemn man of science shuts up a wretched dog in a coffin and allows it to expire slowly through "five or six hours" of suffocation!—doubtless piteously whining all the time to its merciless tyrant for release! If we caught a dull booby of a schoolboy making experiments of this kind we should box his ears or give him a flogging, according to the enormity of the cruelty. But when a "Professor" and "M.D." does it, we accept it as the high travail of the scientific intellect! Bless it!

"At present successful experiments have been confined to animals." So ended the announcement published on New Year's day in the *Daily Chronicle* to the effect that a certain Dr. Mennes, of Louvain, had discovered an anti-toxin for pneumonia. We read of late that 400 distinct microbes had been observed, connected with as many different diseases, and yet it is the fact that in regard to no disease whatever, has any antidote to the poison of these various germs been found. The announcement we have quoted will in all likelihood prove as misleading as many another which has gone before. It is therefore absolutely cruel to suffering people, as Lord Durham once pointed out, to make these announcements unless they are founded on fact.

As it was in 1896 so it is in 1897. Anti-toxin—with all the older remedies at the command of the medical profession thrown in—is powerless to arrest the lamentably high mortality from diphtheria, so long prevalent in London. We read in the *British Medical Journal* (Jan. 16) that:—

"There was a serious increase in the mortality from diphtheria last week, the deaths rising to 71, against 38 and 49 in the two preceding weeks. This is the highest number recorded in any week since 1895, and exceeded by as many as 30 the corrected average number in the corresponding weeks of the ten preceding years."

This is a most grave statement. It not only confirms the belief in the invalidity of the anti-toxin treatment, but it shows that the experiment on patients has failed. The injection of animal substances into the human body as remedies for diseases is proved to be not only unclean and unnatural, but also useless. Nay, worse than useless, for Gottstein has stated that in many instances after-effects manifest themselves which clearly show that the use of anti-toxin for diphtheria is absolutely injurious.

THE tomb in which the remains of the late M. Pasteur have been deposited takes the form of a sort of underground chapel or crypt. It possesses an altar, presumably for the saying of masses for the repose of Pasteur's soul, a process probably in this case highly necessary, if there be any efficacy in the process. Should

the spirit of the dead chemist ever arise and view its surroundings, it will possibly be affrighted to see in the mosaics on the walls representations of the creatures whom its owner in his lifetime was wont to torture, such as fowls, cattle, sheep, and dogs. *L'âme de Pasteur* will probably be also astonished to learn that one of the inscriptions alludes to him as possessing ideals of beauty, art, science, patriotism, and the virtues of an evangelist. The adulators of this false prophet have done more than write his virtues in stone—they have ascribed to him some that he had not. But the vagaries of hero-worship were ever unaccountable. We notice that the worshippers from England who attended the function of the tomb on the 26th of last December, were Sir Joseph Lister, Sir Dyce Duckworth, and Sir W. Priestley. Lister declared that he represented the British Institute of Preventive Medicine at Chelsea, "*filles de l'Institut Pasteur!*"

SOME further "results of treatment of rabies at the Pasteur Institute" were published about the middle of the past month. Some of the cases given we had already recorded; the others we report in this issue. The *British Medical Journal*, in giving the particulars on the 16th ult., remarked that "the increase seems alarming." The highly scientific way in which this result is sought to be minimised is this:—

"In all forms of treatment which, like the Pasteur treatment, are admittedly to some extent imperfect, times of bad luck must come."

Must come? Why the whole time of the Pasteurian operations has been one continuous run of bad luck for a great number of the patients treated. But what does the *Journal* mean by saying that:—

"When it is remembered that during nine years the mortality has steadily diminished, under treatment, from 94 per cent. to 13 per cent., some idea is obtained of the splendid results of the Pasteur treatment."

This can only mean one thing—if it means anything—namely, that while the ordinary mortality following the bites of dogs certainly rabid has been put at five per cent., Pasteurism has not got it below 13 per cent. There must be a good deal of "bad luck" here, then!

ACCORDING to its usual custom the *Lancet* devotes a large amount of space in the last of its December issues to a review of the closing year's doings in medicine and surgery. But in spite of the amount of space expended the *Lancet* is obliged to confess that it has not very much to say:—

"On reviewing the work which has been accomplished in medicine during the current year it is difficult to select any particular contributions or researches which stand pre-eminently forth as having made 1896 a memorable year in medical science; but much good work has been done, more especially on the border lines of medicine and bacteriology, if, indeed, the two should be separated even in literature."

Thus, it appears, it is only the omnipotent and omnipresent microbe that can in any way redeem the situation from one of intolerable dulness.

AND when we inquire further as to how much has been done in this fertile field we are not much advanced. One curious feature of the year's review is that no place is given to pathology as deserving a special section. Pathology is rapidly degenerating under the liquefying influence of microbes into a section of natural history or biology. Hence we find in the summary one section

devoted to "biology and physiology," which opens with a fanfare on the attainments of Lister, thus:—

"It is a matter of great satisfaction to the profession that one of their body should, by his high scientific knowledge and by the successful application of that knowledge to practice, have attained the distinguished position of President of the Royal Society, and in the next ensuing year be elected to the Presidentship of the British Association for the Advancement of Science."

Not being a prophet, of course the *Lancet* could not know that the great desire of its heart was about to be realized in the New Year's Honour list, namely, the proper representation of microbes and the medical profession in the House of Lords. As long as we can remember, the *Lancet* has been uttering the bitter cry, that there was no medical peer. Having got its desire at last, like the well-known infant in the bath, the *Lancet* is happy now!

THE great cause for jubilation in physiological advance is the success of endowed research: the Research Scholarships are "beginning to yield good fruit." It is almost time they did after all the years they have been in existence!

"It is gratifying to find that the Research Scholarships instituted by various corporations are beginning to yield good fruit. Thus Hills, who holds the Research Scholarship instituted by the Grocers' Company, has written an important essay on the physiology and pathology of the cerebral circulation, in which he sustains the view originally maintained by Kellie that the volume of blood in the brain under physiological conditions varies but little; whilst he has in addition satisfied himself that there are no, or but few, vaso-motor nerves distributed to the cerebral vessels, which, if the large branches of the sympathetic nerve that accompany the carotids be considered, seems to require confirmation." The old story! "Confirmation" wanted—*i.e.* more experiments—to make what has already been done of any value.

DR. J. RISIEN RUSSELL and Dr. J. N. Langley come in for the *Lancet's* praise, and here is a passage which shows how many grains of salt it is necessary to take with every new physiological fact:—

"The question of the relation between temperature and excitability in nerve and muscle has been attacked by Gotch and Macdonald, and their experiments show that the frequently repeated statement that increased excitability occurs with increased temperature must not be taken without restriction, since it by no means follows that such tissues become more excitable to all forms of stimulus as the result of an elevation of temperature: in each case the nature of the tissue and the nature of the stimulus require to be investigated."

Yes; and not only that, for we find, a little further on, that the colour of the eyes and hair of the animal must be taken into consideration. Pickering, we are told, has shown that after injecting into the veins of albino rabbits an active solution of nucleo-proteid no clotting takes place, whilst it does when injected into the veins of black or brown rabbits.

THERE is little wonder then that physiology is constantly changing. An evidence of this is shown in the latest edition of a standard work on physiology, "Kirkes' Handbook," edited by Dr. Haliburton. The *Lancet* says it is almost entirely re-written. *Nature* (January 14th) puts the case a little more piquantly. After pointing out the excellent qualities of this work, "an excellent compilation founded on the best work on physiology of its time," Joannes Müller's; "written in

a readable manner so that the attention of the reader was easily maintained, and his interest in the subject never allowed to flag," the reviewer went on:—

"But, alas! science is progressive, and a book on physiology may be ever so readable to-day but will not be read to-morrow unless means are taken to bring its material up to Saturday night."

Progressive indeed! but the only direction in which vivisection makes it progress is backwards and into confusion.

WHEN we come to the section on *Therapeutic Progress* the nakedness of the land is abundantly apparent. Diphtheria anti-toxin has subsided into a fraction of a paragraph. The *Lancet* is not going to abandon its idol completely, but the faint praise after the original flourish is sufficiently damning. Here is what the *Lancet* has to say of the report of the Medical Superintendents of the Metropolitan Asylums' Board:—"This report is cautious in its endeavour to speak with impartiality, but it sufficiently indicates that the mortality in cases of average severity has been distinctly reduced." No doubt the reporters felt that the eye of Lennox Browne was upon them. As for the other anti-toxins this is all that can be said:—

"Tetanus anti-toxin does not appear to have given as much general satisfaction, although in isolated instances it would seem to have contributed to the recovery of the patients. Many other forms of serum have been devised for other diseases, but have hitherto failed to establish firm conviction of their efficacy."

ANOTHER discovery about which a great deal of fuss was made not long ago has already lost much of its glamour. "Further investigation" is a very dangerous process to apply to any experimental discovery:—

"Further investigations during the year have somewhat limited the sphere and utility of permanganate of potassium as an antidote in cases of opium poisoning, and it now appears to be conclusively proved, both clinically and experimentally, that permanganate of potassium can only act upon such opium or morphine as it comes into contact with in the stomach, while it has no power of arresting the action of morphine after absorption."

As further showing the short lives enjoyed by cures which proceed from either physiological or chemical laboratories the following may be read with interest:—

"The year has been notably deficient in anti-pyretics, in fact the general tendency of modern therapeutics appears to have turned against the employment of medicinal anti-pyretics, while greater stress has been laid upon other methods of reducing temperature."

After the great vogue enjoyed by anti-pyrim, anti-febrin, phenacetin and their relations during late years this is indeed significant.

ALTOGETHER the *Lancet* is fully justified in saying that "it is difficult to select any particular contributions or researches which stand pre-eminently forth as having made 1896 a memorable year in medical science." And we may add that the year has produced nothing whatever to atone for the vivisections which are unceasingly prosecuted throughout the laboratories of Europe and America.

It seems quite easy for the foreigner to exploit the English press with almost any stale sensation in the off-season, if he be but clever enough to draw his article in vivid terms. On the 7th of December an article of this kind was published in the *Daily Graphic*. We had

heard of Dr. Calmette, and his anti-venin for snake bite before, but no light on the subject seemed to have previously penetrated into the editorial sanctum of the paper named. The experiments on animals were numerous, and as we learn from the *Graphic*—no doubt “according to information received”—most interesting, and it was claimed that “already remarkable success has attended the use of this anti-venomous serum.” It so happens that we have authentic private information from a correspondent at Bombay as to an alleged successful case. The snake, alleged to be “a big black one,” only made one puncture, and as it was not caught there is no proof that it was a poisonous reptile. Still, we suppose the scientific party will treat this as a settled success, the bitten person having taken no harm.

Dr. THOMAS O. SUMMERS, writing in the December number of the *International Journal of Surgery* says, “If there is anything that distinctively marks the medical era which closes with the nineteenth century, it is the profound revolution in therapy.” We of course expected to be told that experiments upon animals had brought about this alleged revolution in the art of healing, but were agreeably disappointed. In words which will delight our Vegetarian friends, Dr. Summers goes on to explain that one of the most important factors in this advance in medicine is the discovery of those remedial agents which are active in the support of such tissues in our frame as can receive nutriment only from a previously prepared substance.

WHAT is this remarkable “frame food”? He says that, “It has been found that there is a principle of peculiar power in the bean, which thoroughly supports the nerve and osseous organism, while at the same time it sustains and stimulates the general cellular activity of the body.” But is this so very new? The sacred bean of Pythagoras was the object of religious veneration in Egypt: so sacred was it that the priests were commanded not to look upon it. The extraordinary virtues of beans have long been recognized in tropical countries and it cannot be said that they have been altogether overlooked in the Western world. But physiological chemistry has certainly discovered the true reason of their value in the readily assimilable nature of vegetable albumen in leguminous foods. This is a good example of the true direction in which medical studies should be pursued.

THAT much-boomed quack nostrum, anti-toxin, is a nucleus round which is collecting as much fable and nonsense as go to make up an African fetish. The *Birmingham Gazette* of January 5th, said:—

“Doctors are becoming enthusiastic about anti-toxin as a remedy for diphtheria . . . One doctor tells his patients that he has filled a glass jar with the diphtheria bacilli, and has put in anti-toxin, and under the microscope watched it devour the bacilli. What is more convincing are the extraordinary results at the Hospital. [What hospital?] Before anti-toxin was used the mortality in diphtheria patients admitted was 65 per hundred. Since anti-toxin has been used the mortality has been decreased to three per hundred.”

It would hardly be possible to make more misstatements or concoct greater absurdities in as many words as are contained in this paragraph. In the first place, as anti-toxin is neither an animal nor a vegetable, it can “devour” nothing. Secondly, as the anti-toxin does

not attack the bacillus of diphtheria itself, but the malignant poison which it secretes and sends into the blood-current, the doctor in question could have seen nothing of the process under the microscope or anywhere else. Thirdly, the death-rate of 65 per cent. under the old treatment could only have taken place in a very dirty and ill-managed hospital, probably on the continent. Dr. Lennox Browne says the mortality under the best conditions with the old treatment was no higher than that obtained at the same place with anti-toxin. Lastly, the wildest and most enthusiastic advocates of anti-toxin have never claimed so low a death rate as three per hundred. The *Medical Annual* for 1896, in a summary of over eleven thousand cases, gives the average mortality with the serum treatment as 15·4 per cent.

DIRECT electrization of the stomach is one of the new experiments on that ill-used organ. The patient is made to swallow what is termed a “deglutitive electrode,” to which a wire is attached, and then a sponge electrode is applied outside the stomach. All this has been tried on animals. Meltzer practised on dogs, cats, and rabbits. Einhorn says of these researches, “In contrast to Meltzer’s experiments on animals I will report some of my own observations.” Seventeen experiments were made on rabbits, dogs, frogs, etc.; their stomachs were opened whilst the animals were alive. The results were perfectly characteristic of all vivisectional observations. Says Dr. Einhorn, “My experiments are thus not in harmony with the statements of Meltzer.” Of course not!

The *Medical Times and Hospital Gazette* of January 2nd, had an article on “The Work of the Pasteur Institute.” Referring to the report of the Institute during the quarter ending June 30th, 1896, it said:—“No fewer than six deaths, some of which occurred earlier in the year, of persons under treatment were reported during this period.” If the other medical journals were as candid as the *Medical Times* the doctors would be a good deal surprised, we fancy.

The *Medical Times and Hospital Gazette*, January 2nd detailed the circumstances of a terrible Hospital Scandal at Adelaide. The Cesarean operation was performed on a young married woman, as is alleged, not only without her consent or knowledge, but without a single relative’s consent or knowledge, although the mother and sister lived close to the hospital gates. The poor woman died and her mother writes:—

“I want to know why he [the doctor] is not to be punished for being the cause of my daughter’s death. . . . I hope every true honourable man will take it up and see that he is properly punished.”

We learn by a Dalziel’s telegram from Paris in the *Morning Advertiser*, January 13th, “That the agitation against the reckless way in which women are operated upon in Paris on the slightest pretext, has received a fresh impetus by the complaint of a gentleman in the service of the municipality against a well-known surgeon, whom he charges with having caused the death of his wife by performing an operation. The poor woman was, it is stated, three hours under the knife, and died after suffering great agony. It is alleged the doctor first thought she had fainted, and when he discovered life was extinct he was greatly distressed. The husband had not been informed of the doctor’s intention to operate, although he had been told a slight

operation might be necessary later on. The police have the affair in hand, but so far the incriminated doctor has not been placed under arrest." The Vivisection mania is responsible for this operative madness.

MESSRS. PARKE, DAVIS & Co. of Detroit, Michigan, are widely advertising their special brand of anti-toxin for diphtheria. They say in large type, "Only young and carefully examined horses are used for producing the anti-toxin. And we have never yet had reported a case of sudden death following the use of our Serum." Comment is needless.

M. PAUL DE CASSAGNAC once called doctors who hunt in couples and share the booty between them "dichotomists." He speaks of a surgical home where patients are sent by their doctors to have imaginary or unnecessary operations performed upon them, for which they pay anything but imaginary fees. Mr. John Tweedy said in the *Lancet* some time ago that dichotomists are not wholly unknown in England in connection with certain nursing homes in London. Knowing what we do of the rage for operating, we are disposed to believe it.

DR. STERNBERG'S great *Text Book of Bacteriology*, just published, contains a chapter on experimenting upon animals, which is full of instruction for us. The author says (p. 94):—

"The lower animals have their own infectious diseases, some of which are peculiar to certain species and some common to several. As a rule, the specific infectious diseases of man cannot be transmitted to lower animals, and man is not subject to the diseases of the same class which prevail among animals."

"The bacillus of mouse septicæmia is fatal to house mice but not to field mice, while, on the other hand, field mice are killed by the bacillus of glanders and house mice are immune [or exempt] from this pathogenic bacillus."

"The animals most commonly used for testing the pathogenic [disease-producing] power of bacteria are the mouse, the guinea-pig, and the rabbit. Domestic fowls and pigeons are also useful for certain experiments. The dog and the cat are of comparatively little use on account of their slight susceptibility."

A special instrument is mentioned for holding the mouse called "mouse-tongs"—an article of the laboratory which is new to us.

ON p. 97 we have details of the horribly cruel method, now so much in vogue, of inoculating the eyes of animals with infectious diseases. The author says:—

"Inoculations into the anterior chamber of the eye of rabbits and other animals have frequently been practised. The animal should be fastened to an operating board, belly down, and its head held by an assistant, who at the same time holds the eyelids apart. The conjunctiva is seized with forceps to steady the eye, and an incision is made through the cornea with a cataract knife."

To deaden the pain in some degree cocaine is recommended to be applied, but the operation is the least part of the experiment; the days and weeks of suffering which follow the inoculation of the virus are far the more cruel portion of the business.

WE further learn from Dr. Sternberg that rabbits are very apt to die from chloroform, no matter how carefully it may be administered, and the experimenter in bacteriological inoculation is told to look out for the effects of his work. Amongst these are fever, loss of activity, loss of appetite, weakness, emaciation, diarrhoea, convulsions, and formation of abscesses.

FURTHER MORTALITY AFTER THE PASTEURIAN TREATMENT.

The authorities of the Pasteur Institute in Paris, in the issue of the *Annales de l'Institut Pasteur* for December 25th last, recorded no fewer than six deaths of persons who had been under treatment. One case was that of Thomas Openshaw, Bury, Lancashire, who, as already reported by us, had been bitten badly on the two hands in November, 1895, and had been under treatment from November 22nd to December 3rd. He died on January 16th according to the *Annales*, but according to the *Manchester Guardian* on the 14th of July, 1896.

The death of Thomas Lambert, of Stockport, already reported by us, under date of June 20th, is also now officially admitted.

The following deaths after treatment have not been previously reported:—

Louise Lasalle, aged 28 months, of Pomarez, in the department of the Landes, who was bitten on October 16th, 1895, treated at the Pasteur Institute from October 19th to November 5th, and died April 4th, having been bitten in three places in the right arm and hand.

Léon Cros, aged 26 months, who was only bitten on July 19th, and was under treatment at the Pasteur Institute from July 25th to August 11th. Symptoms of hydrophobia declared themselves on August 25th and the child died on the 28th. He had been bitten in two places on the left leg, through a woollen stocking, and the dog which inflicted the bites had been declared mad by M. Gilis, veterinary surgeon at Béziers.

Joseph Avegger, a Swiss lad of 20, from Willis-au-Campagne, who was bitten very badly on the nose and upper lip on October 20th, 1895, and was under treatment at the Pasteur Institute from October 28th to November 17th, 1895. He died of hydrophobia in the December following. The dog which had bitten him was declared to be mad by M. Wandel, veterinary surgeon at Lucerne. Joseph Avegger was, unfortunately, given to drink, and was frequently in a state of intoxication while under treatment.

Another case not in the *Annales* is reported to us from Amsterdam, by Mr. A. J. J. Eveling, as having occurred in Batavia. The victim in this case was Lieut. L. van Teyn, belonging to the Dutch Army in the East Indies. He was bitten on the 22nd of September, 1896, by his own dog, when at Assch. He proceeded by the first steamer to Batavia, where he submitted himself to the Pasteur treatment. After his return to Batavia he was seized with hydrophobia, of which he died on the 24th of November.

We quote the following from the *British Medical Journal* of January 2nd, 1897:—

"RABIES IN AMERICA.—The New York correspondent of the *Daily Mail*, telegraphing on December 27th, states that eight Baltimore boys recently bitten by a mad dog were sent at the city's expense to the Pasteur Institute, New York, for treatment. They remained a week and were duly inoculated. During the past few days two of the boys have died from hydrophobia, while symptoms of the disease have appeared in a third."

THE PETITIONS AGAINST THE CHELSEA INSTITUTE.

We are requested to print the following names from among those appended to these petitions, in addition to those published last month:—

BETHUNE, LIEUT.-COL HENRY, 41, Marina, St. Leonards-on-Sea
CLAYPOOLE, WILLIAM H., Esq., Scholar of Merton College, Oxford
KEBBY, A. H., Esq., B.A., (Bodleian Library), 2, Beaumont Buildings, Oxford

HITCHINGS, GEO., Esq., M.R.C.S.E., L.S.A., 37, Holywell Street, Oxford

MACLACHLAN, JOHN, Esq., M.D., F.R.C.S., 38, Beaumont Street, Oxford

PARKER, GEO., Esq., (Bodleian Library), 39, Wellington Square, Oxford

ROWLEY, Mrs., 39 and 40, Hythe Bridge Street, Oxford

THURLAND, W. F., Esq., (Bodleian Library), 98, Hurst Street, Oxford

THE PROPOSED PASTEUR INSTITUTE IN INDIA.

The following letter was sent out to eighty-one Indian editors for insertion in their journals:—

SIR,—The reflective portion of the British community at home who watch with interest the affairs of India are noting with apprehension the efforts of pro-Pasteurians to set up a Pasteur or Bacteriological Institute in India. It is almost incredible that the introduction of the inoculating system should be proposed for India of all countries in the world. Have the awful days of the Mutiny so entirely died out of English memories that the incident of the greased cartridges no longer serves as a warning against offending the religious beliefs of the people? And how infinitely greater offence is now proposed by the advocates of the Pasteur Institute for India than that which caused the horrors of that terrible epoch in Anglo-Indian history! To introduce animal matter, and diseased animal matter into the very blood—this is sheer pollution in the eyes of thousands upon thousands of Indians. What madness has prompted those who would not only inaugurate such a practice in the land of the Brahman, but would actually saddle the British Government with the responsibility of such an institution? The incantations of the magicians must have been powerful indeed!

A house of torture in India—in the land of noble philosophies and beneficent faiths; the land where great masters have taught that animals are indeed our younger brothers, entitled to our protection and compassion because of their very defencelessness! Is this generous faith to be set aside for the creed of the vivisector, who urges us to tear benefits for ourselves out of the agonising bodies of our dependents? What has become of the English love of fair play, the English horror of cowardliness, the manly English instinct to side with the weak and the oppressed? To buy ease for ourselves by means of the torture of our dumb fellow-creatures—is the idea to be squarely faced by any sound heart or sane intellect? Of one thing, however, we may be very sure, whether we consent to the hideous doctrine or protest against it; benefits for the human race we shall never win by savagery such as this. Nature will not—she cannot—return good for evil. She pays back strictly every item in the same coin, and to supreme cruelty she will not yield the beneficent secrets of health and peace. She gives the just recompense, sooner or later, in suffering.

The other day I heard from a doctor that he had been informed by a medical friend in Edinburgh (an active centre of vivisectional research) that a curious and rapid lowering of the tone and deterioration of character was invariably noticeable among young men as soon as they took to vivisectional research. This is indeed a self-evident fact, but it is interesting to find the fact observed and stated by a man whose profession inevitably tends to bias him in favour of the practice.

We here catch a glimpse of the resistless working out of the world-old law: that man must reap that which he sows. If he sow cruelty, cruelty and pain he shall assuredly reap. If we could trace exhaustively the effect in every detail of fate and influence on those whose characters have suffered the deterioration noted by the Edinburgh physician above mentioned, we should have some idea of the intricate and subtle processes by which all things morally find their level, so to put it; we should see how suffering is perpetuated among the human race, ramified far and wide till the wrong that was done is expiated.

Will not the people of India rise in united protest against the erection in their midst of a Government-founded centre of disease and madness and cruelty—a house of torment where unoffending creatures will literally be tortured to death?—where their tormentors will be set running down the steeps that lead eventually to moral death.

Would that the greatness of the wrong and the awfulness of its consequences could be made as manifest as they are certain.

Yours faithfully,

MONA CAIRD.

7, Kensington Gardens Square,
London, W. January 8th, 1897.

OUR CAUSE IN THE PRESS.

"Scrutator" writing in the *Christian Million* of December 31st, made the following very sensible observations:—"At a church we attended last week there was a petition lying for signature against the proposed licensing of certain premises in Chelsea for investigations and experiments involving vivisection. Listening to remarks made by various members of the congregation, we soon found there were diverse opinions on the subject, and we came to the conclusion that it was the belief of not a few that it was not only lawful but necessary that such experiments should be made in the interests of man's well-being. From this we emphatically dissent. It is cowardly, cruel and unjust to inflict pain upon the helpless, so that men may come to possess more knowledge. Perish the knowledge thus obtained. The animals cannot protest. They have no power of self-defence. Their only crime is they are helpless. If it be right for us to act in such a way towards the weak and defenceless it would be right also for any above us to act in the selfsame manner towards us. Oh no, it is said, a line must be drawn, and we draw it at man. This we do not understand. If man has rights, so have animals. Christian ethics reach to every action and embrace every class of existence. We may not act in one way to the great and strong, and in another way to the weak and helpless, Justice and equity pertain not to equals alone but still more, if that were possible, to the strong and the weak as well. To inflict fearful agony upon sentient beings, no matter if they be but mere animals, is to drag down our nature, compromise our morals, and turn the human being into a fiend."

TYRANNY IN OUR HOSPITALS.

(FROM "THE ECHO," LONDON, JANUARY 6th.)

SIR,—I was greatly struck by a letter which appeared in your columns some days ago. It told of how the nurses at a certain hospital in London were afraid to sign a memorial to the Home Secretary against vivisection being permitted at the British Institute of Preventive Medicine on the Chelsea Embankment. I am not surprised at this fact which has come to light, and I am very glad it has come to light. It shows what has often been said, that the vivisectioning ring (to use Thomas Wakley's term for the medical despots of his day) is known by those who are in close contact with it to be ready to crush out dissent from its dogmas at all costs. For what greater cost, what greater price can it demand, than that hospital nurses shall, from fear of its ruining them professionally, hide and crush down those sentiments of pity on which this memorial is founded; those sentiments of pity, which, if non-existent, or if silenced, will make the nurse anything but a safe person in the ward of a hospital which numbers an enterprising scientific medical man among its staff. This little story tells a tale which will not tend to make people unbutton their pockets when funds are asked for our hospitals. It tells a tale of how pity and gentle feelings are not at a premium in the eyes of at least one hospital staff, and justifies too much the doubts and suspicions now so rife, as to how our hospitals are conducted.—Your obedient servant,
W. W.

(FROM "THE ECHO," JANUARY 7th.)

SIR,—I know not whether I was more surprised than indignant when I learned that the nurses at one of our large hospitals were intimidated when it was discovered that they had signed a petition against the registration of the new Pasteur Institute at Chelsea. I say I was surprised, though I ought to have known well enough that a nurse in a great hospital, with a vivisector on its staff, is not permitted to exercise the right of private judgment, nor utter the faintest protest against scientific cruelty. Of course it would never do were it otherwise. What would have happened to the men employed to tidy up and set in order the torture-chambers of the Inquisition in Spain if they had been addicted to signing petitions against cruelty to heretics? What to the dealers in firewood and stakes for the *autos-da-fé* if they had expressed their disgust at cremating men and women alive? No, no, it would be contrary to *esprit de corps*; in places of this sort they must all

hang together; perhaps they will when a little more light is let in on these "dark places of the earth, full of the habitations of cruelty," and while the iniquity is tolerated by a Christian nation even our good nurses must not complain; they are part of the system, and so must submit to be tarred with the torturer's brush. All this shows the far-reaching and corrupting influence of this scientific devilry. It must even taint the woman's soul. Pray let us know the name of this Star Chamber hospital, let us memorialise the subscribers. My pen itches to go for it!—Yours, &c.,
January 5th.

EDWARD BERDOE.

PASTEUR AND HYDROPHOBIA.

(FROM THE "NEWCASTLE DAILY LEADER," JANUARY 2ND.)

SIR,—In reference to Mr. Collinson's letter on the treatment of hydrophobia, in your issue of December 24th, will you kindly permit me to make a few remarks?

Your correspondent gives two recent cases, one of prevention and one of cure of hydrophobia by means of the Buisson vapour bath treatment.

Yet, according to the newspapers, a subscription is being raised for the purpose of sending to the Pasteur Institute, Paris, three children from Gorton and Reddish, who have been bitten by a dog which was subsequently certified by veterinary surgeons to have been rabid.

Surely it is a deplorable mistake to subject people to a method of treatment the inefficiency and danger of which are demonstrated by a constantly increasing death-roll.

It is certainly not reassuring to know that 334 persons have died from hydrophobia after receiving Pasteur's preventive inoculations.

Only last year a child of three, named Ethel Wilkins, was sent to the Institut Pasteur, and after undergoing treatment for a fortnight developed hydrophobia, after which the doctors experimented on the dying child by administering twenty-four inoculations in two days.

Though there is indubitable evidence that the Pasteurian inoculations have communicated hydrophobia to an uninfected person, when a delusion like Pasteurism has taken possession of the public mind, through the prestige given it by scientific names, it is extremely difficult to dispel.

If, however, there were no safer and better method of treating persons bitten by rabid animals, there would be some excuse for hurrying them off to Paris; but such is not the case.

The vapour-bath treatment, known as Buissonism, is the only one known to have been successful in curing hydrophobia. In the spring of this year the advocates of this more rational and humane system established a Buisson Institute at Spring Grove House, Upper Norwood, London, under the direction of a physician, at which bitten persons are treated gratuitously on the most advanced principles of hydropathic science.

If people would only investigate for themselves the respective merits of these systems of treatment there is little doubt that the vapour bath would be universally adopted, to the great saving of life and suffering both human and animal.

—I am, &c.,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

DIPHTHERIA AND ITS ANTI-TOXIN.

(FROM THE "DAILY NEWS," JAN. 9TH.)

SIR,—I am glad you have given such prominence to your notice of Mr. Lennox Browne's book on Diphtheria, and especially that part of it dealing with the statistics of anti-toxin. Nothing could be more pertinent than the criticism he has brought to bear on the figures as given by the different authorities. The fact is there are not only fashions, but there are also passions in physic: and so far from the "dry light of science" being invariably brought to bear on questions of methods of treatment, they are much more often taken up in a blindly partisan spirit. It was ever thus; and there have been times when the partisans of various treatments have put their theories to the bloody arbitrament of a pitched battle. This actually occurred about the middle of last century at Göttingen, when the students took up arms in defence of the principles of John Brown, of Edinburgh, after whom they were named Brunonians. All the more credit, therefore, is due to those who have the courage to criticise a method of treatment when it is the fashion. Among these Mr. Lennox Browne has taken a

prominent part in the anti-toxin dispute, but he has not been by any means alone. Gottstein, of Berlin, was led by the incident of the death of Dr. Langerhans's boy (which was first reported in your columns) to make an investigation into the treatment, and his results, given in *The Therap. Monatshefte*, were summed up by the *British Medical Journal* as follows:—

It must also be remembered that many of the cases which recover develop complications due to the anti-toxin; out of 1,805 such recoveries (in 2,228 cases) recorded in Berlin during the first quarter of 1895, 420 showed exanthemata or other signs arising from the anti-toxin, a total of 23 per cent. Gottstein enumerates 14 cases in which diphtheritic children appeared to have died from the effects of anti-toxin, and four in which diphtheria was excluded, but the child nevertheless succumbed. He comes to the conclusion that in a certain definite number of cases, not confined to patients suffering from diphtheria, the injection of anti-toxic serum has been rapidly followed by fatal collapse. He considers that in spite of the large number of cases which recover without any after-symptom, the fatal instances show diphtheria anti-toxin is a more or less dangerous remedy, often leading to the symptoms by poisoning by fibrin ferment. He considers also that the proportionate danger is greater than that with chloroform, since the latter is at any rate certain in its action, whereas the serum often fails altogether, while its immunising power is most variable.

In the United States similar weighty objections have been urged against the anti-toxin treatment.—Yours, &c.

JOHN H. CLARKE, M.D.

30, Clarges Street, W., Jan. 8th.

THE PASTEUR INSTITUTE AND THE DOGS' HOME.

(FROM "THE ECHO," LONDON, NOV. 24TH, 1896.)

SIR,—I have read a letter in your issue of yesterday, from which I learn Dr. Erskine has stated that chloroform was always administered to animals subjected to vivisection, and that they suffered less than those put to death in the lethal chamber at the Dogs' Home, Battersea. With regard to the first part of this statement, it is now perfectly well understood that chloroform is not used in all experiments upon animals, and that, when it is, it so alters the condition of the subject operated upon that accurate results are not forthcoming. The second part of the statement is quite a new Pasteurian move, by which, doubtless, it is sought to throw dust in the eyes of the public by comparing their cruel butcherings with the humane operation of the lethal chamber at the Dogs' Home. I trust you will permit me to remind the public that a much greater authority than Dr. Erskine—Sir Benjamin Ward Richardson—has asserted that by the lethal process animals die "a death so merciful that no man or woman can expect to meet with as peaceful an end." Moreover, not even the most bigoted vivisectionist would venture to say that the animals at the Dogs' Home revive from their euthanasia to undergo fresh tortures, as in the case of their less fortunate brothers who fall into the hands of the experimentalist.—Yours obediently,

HENRY J. WARD, Secretary.

Temporary Home for Lost and Starving Dogs, Nov. 21st.

THE LOVE OF VIVISECTION—A MORAL DISEASE.

That persistent supporter of our cause and objects, "Spero Meliora," writing in the *Echo* of January 11th, commenced an article as follows:—"As science becomes more and more identified with torture so the tendency is to pass, imperceptibly perhaps, from the love of science into that of torture for its own sake, and for the excitement it gives. The one has got hopelessly mixed up with the other. This curious blending of science and torture makes torture a science, and makes science of torture. The power of the habit so formed must get a stronger and stronger hold upon those who practise it, and the torturer could in time no more wrench himself away from the fascination of his habitual pursuit than could the sensualist or the drunkard. (Especially is this the case with the vivisector, as he could, and does, so readily deceive himself with the most specious excuses.) That this is so is obvious to all who do not shut their eyes to the facts of the case, and who have some knowledge of human nature. A well-known vivisector once testified to the joyful excitement which this practice of torturing caused in him. Schiff is another instance, who, having every inducement to keep away from the practice, after a short time of trial, found he could stand it no longer, willingly relinquished everything and went back to his science (i.e. his incessant and excruciating acts of torture)."

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, FEBRUARY 1st, 1897.

"FILLE DE L'INSTITUT PASTEUR."

THIS was the phrase in which Sir JOSEPH (now Lord) LISTER described the objectionable structure at Chelsea, euphemistically named "The British Institute of Preventive Medicine," on the ground, we suppose, that it will do the very opposite to preventing, and actually serve as a place in which to increase and multiply the germs of disease. At the present time nothing is more certain than that the bacteriologists cannot prevent any disease which has already broken out from running its course by any but the old methods, if by those. By beginning earlier, or going further back, they can prevent disease by removing the cause of infection. That, however, is nothing new, nor anything very scientific. The old Inspectors of Nuisances, under the Boards of Health, were the pioneers of improved sanitation in this country, and very well they did their work. To them is due the honour of lowering the death-rate, by simple but effectual means unconnected with the torture of animals or any other reprehensible so-called science. It is, therefore, in accordance with common sense that the opponents of animal torture should do their utmost to impede and prevent the development of this "daughter of the Pasteur Institute" in London. The campaign has been a long one; it was commenced between two and three years ago, when it first became known that such a place was being planned. Immediately the proposal was opposed in the strongest manner, and from that time to this, in spite of some rebuffs, the work has never flagged. The greatest effort of all has only lately drawn towards completion. This has consisted in the dividing up of London into defined districts, to each one of which have been allotted a number of earnest workers; and in every one of these districts a close personal canvass has been made. Central offices have been opened, and from thence have emanated parties of zealous workers who have spread themselves in all directions, carrying information and enlightenment to all and singular. The first result is that hundreds of thousands of people, if they were ignorant before, now know much, if not all, about the question at issue. Many thousands have signed their names to protest

against the objectionable Institute and the idea of allowing it to become a hotbed of vivisection, in addition to the many centres of legalised scientific torture already existing in the metropolis. The number of those who have signed far exceeds 100,000, and when the petition is made up and presented the precise numbers will be given in the "ZOOPHILIST." The zeal and devotion of the friends of our Cause who have participated in this great undertaking have been beyond praise, while the value of their services cannot possibly be over-estimated.

Meantime, our opponents are not quiescent. In addition to the real or feigned undertaking of a counter memorial, a number of them met at St. George's Hospital, on the 7th December, to promote a monument to JENNER, the author of the idea of vaccination against smallpox. A resolution was passed to the effect "that a subscription be set on foot with the view of founding some institution, of a nature to be hereafter determined, in connexion with the British Institute of Preventive Medicine, to be distinguished by JENNER's name." We very much fear that the meaning of this is that the second wing of the Institute at Chelsea is to be attempted to be raised as a monument to JENNER. The building as it exists at present comprises the central portion and one wing—to the south—only. The presumption is that if its promoters and proprietors had had the means they would have completed it at one operation. It is some small consolation, therefore, to think that large as the sum placed at their disposal was, it was insufficient. Dr. WILKES, speaking at the meeting, remarked that "anti-vaccinationists, in opposing vaccination, forgot that they were opposing a great doctrine of the present day . . . of which vaccination was but a part." This indicates the direction the memorial to JENNER is intended to take. If more evidence be needed on that head it was supplied in the fact that both Professor MICHAEL FOSTER, of Cambridge, and Professor BURDON SANDERSON, of Oxford, were there, and that, according to the *Lancet*, the latter "traced the links between the Jennerian discovery and the work of the British Institute of Preventive Medicine." These laboured attempts to link up JENNER with the Institute indicate clearly enough that the design is to trade upon JENNER's name for the purpose of raising funds.

The public, however, will not, we believe, subscribe to anything of the kind. They did not show any inclination to support the Institute in the case of the former appeal, and will not now. And why should they? They were told at the St. George's meeting that intermediately between JENNER and the Institute were found PASTEUR, KOCH, and LISTER. But the names of these men are all indicative of failures. PASTEUR's anthrax and hydrophobia nostrums have failed. Both have killed the patients they were to cure. Professor B. SANDERSON himself, on this very occasion, said "it was a dark day when KOCH's tuberculin was shown to have failed." LISTER himself confessed at Berlin, in 1890, that his system of antisepticism had failed; while Dr. CAMPBELL BLACK, of Glasgow, writing in the *Medical Press*, at the

end of last year, made this emphatic declaration:—"I have no hesitation in characterizing it [the Listerian antiseptic system] as the greatest scientific fraud (with the exception of 'Pasteurism,' *re* Hydrophobia) of the nineteenth century." These then be the prophets of the bacteriological school. These are the leaders it is proposed to follow at the Chelsea Institute, now and hereafter. But what leaders! They are already discredited; their reputation is gone. Well may we then wish success to our strenuous allies, and hope that through them the "*fille de l'Institut Pasteur*" may be analyzed and overthrown.

CONFUSING THE ISSUE.

THE most fervent desire of the Anti-vivisectionists is like that of Job: "O that mine enemy would write a book!" We ask for nothing so much as something definite to answer. When our opponents condescend to particulars, point to something concrete, and put their objections in set terms, we can deal with them. We like "Clinchers," but object to clouds. We can deal with the tangible but the abstract eludes our grasp. Clinchers, however, are luxuries we cannot expect every day; it is seldom that our wary opponents give us the opportunity of upsetting their scientific ninepins with a well directed ball. The pins and the bowls are for honest play; there be those who prefer the thimblery, and of such many be doctors we are sorry to say. Legerdemain plays so important if disreputable a rôle in the tactics of those who claim the right to torture that much of the work of the *Zoophilist* necessarily consists in exposing the tricks of those who set traps to catch the unwary and deceive our friends. People are so ignorant of the history of medicine that nothing is easier for the unscrupulous scientist than to declare with the certainty of being believed that Vivisection heals all our infirmities and cures all our diseases. Though the histories of religion and civilization cannot be studied efficiently without some attention to that of the medical art, nothing is more neglected; doctors know little of it, and the public at large simply nothing; as the *Saturday Review* once said, "When we have recovered from our sickness and paid the doctor's bill we have no further interest either in the physician or his art." Not one doctor in a thousand knows how we came by our medical and surgical knowledge. HIPPOCRATES is but the shadow of a great name, ÆTIUS and ORIBASIIUS words which signify nothing in their ears. Lecturers on physiology and others interested in catering for the demand of the Royal Society for something new in science carefully instil into the minds of students that the knowledge of the processes of health and disease which does not come by the way of the laboratory is not worth having, and so we find a Dr. MAX EINHORN saying in the *New York Medical Journal* for December 12, 1896, that "old, well-recognized remedies which have stood the test of experience are occasionally repudiated by physiological experiments, is an occurrence which has been of late frequently observed," and he instances the fact that the supposed virtues of

bitter tonics have been refuted by the experiments of TSCHELZOFF on dogs and of JAWORSKI on human beings; and he adds, "Notwithstanding this the bitters continue to be used, and I should not be astonished if new experiments, arranged somewhat differently, should prove the efficacy of this class of remedies and obtain for them warm advocates. Although I am, myself, an ardent believer in experimental investigation, I am, nevertheless, of the opinion that old facts should not be so quickly upset."

Here we have a startling example of the vivisectioning attitude. Experiments can be arranged at the will of the researcher to support any theory which at the moment may best suit his purpose. He knocks down, and he builds up, bends the facts to his will, and compels the experiment to accord with his fancy. This is the scientific medicine thrust down the throats of our budding doctors. Your experimenter, like BORROM, is prepared to play any part. It is indifferent to him whether he roar like a lion against a certain theory, or aggravate his voice to support it "like any sucking dove." All he demands is that the medicine-drama shall not be played without him. He is ubiquitous, and insists on being prominent in everything. There lies before us a sheet of paper on which a vivisectioner has set forth in the form of brief notes, the case for his party. It is appropriately headed by the following characteristic motto, "The Medical Profession claims for all investigation into Nature's ways, the most unshackled freedom of inquiry." See what this implies: the right to experiment on the helpless sick, on friendless children, idiots, lunatics, and condemned criminals. "Unshackled freedom of inquiry" would deliver to the experimenter the whole body of the helpless, bound hand and foot, and placed at the disposal of the scientist. This, at least, is definite enough. But now, to bewilder and befog us, the writer goes on to say that "The only sure ground on which pathology can stand is morbid anatomy." But morbid anatomy is the anatomy of diseased subjects; it deals with the dead body of a being in an abnormal condition, and has nothing to do with vivisection. We cordially approve the sentiment, but, as it was written, it is evident that its object was to draw a red-herring across the scent. He brackets together the labours of anatomists with the work of vivisectioners, as who should attempt to unite the missions of the preacher of the gospel in Africa with the business of the importer of "trade-gin." Because medical men have been discoverers, and benefactors of humanity as physicians, we are to condone the iniquity of vivisection. This would be like overlooking the cruelties of the Duke of ALVA because he was loyal to his master and his creed, and forgiving CLAVERHOUSE because he was an episcopalian. So our antagonists tell us how Dr. BRIGHT, for unrewarded years, toiled in the hospital wards, investigating disease and studying its consequences in the dead-house, till he had found out, described, and taught us how to cure the malady which bears his name.

What had BRIGHT and his brilliant discoveries to do

with Vivisection? Actually nothing! We have taken the trouble to go to the Library of the Royal College of Surgeons and search the pages of his immortal *Reports of Medical Cases* and cannot find a vestige of evidence to show that experiments on animals were performed by him at all. In his preface he says:—

"To connect accurate and faithful observation after death with symptoms displayed during life must be in some degree to forward the objects of our noble art; and the more extensive the observation, and the more close the connection which can be traced, the more likely we are to discover the real analogy and dependence which exists, both between functional and organic disease, and between these and the external symptoms which are alone submitted to our investigation during life."

In these pregnant words, Dr. BRIGHT condemned the vivisector and all his ways, and so far from lending the weight of his great authority as a discoverer to the methods of the laboratory his example is one which tells entirely upon our side and may be recommended to every true student of the healing art. More speciously our opponent points to JENNER as an experimenter on animals and to his great discovery as an example of the benefits of vivisection. No doubt the cow and the horse played some part in the invention of vaccination, but it was by accident and not by design. As a fact, as Dr. MACAULAY puts it:—

"The discovery was made, and the demonstration completed so that the medical profession adopted the practice of vaccination and the whole civilized world recognized its importance and value, before a single experiment had been made upon a living animal."

LUCAN said of CATO that "he believed himself to be born not for himself but for the whole world," and it is claimed that this is the motto of every good doctor. The ideal is a noble one, but we decline to believe it can ever be attained by hardening our hearts and suppressing our natural feelings of humanity till the vivisector's ideal can be achieved.

THE EDITOR OF "TO-DAY" ON STRONG OPPOSITION TO VIVISECTION.—In reply to "H.R.," a correspondent, in his issue of the 9th of January, the editor of *To-day* (Mr. Jerome K. Jerome), wrote as follows:—"On this matter of vivisection I feel strongly, and I know I speak strongly. One does not enter upon a contest with the idea of not wounding one's opponents. To be perfectly candid, if two phrases occurred to me, one of which would not give offence to the vivisectionists, and one of which would, I should unhesitatingly choose the latter. I am fighting, and I want to hurt. I do all I can to help to create among the public a growing horror and detestation of vivisection, and of those who support and advocate vivisection. That facts have been discovered from vivisection may be granted, but it must also be admitted that these facts could as easily have been discovered by more legitimate means. A large number of medical men maintain that vivisection has hampered medical science by leading students towards a cumbersome and dangerous line of research—a line of research that often has, and often does lead to error. I am rather inclined to welcome strong opposition or strong friendship. I dislike that journalism that is all things to all men, and to say that a man had no enemies would be, to my thinking, to stamp him as being worth very little friendship. As to your friend's suggestion that I am 'a good man, but mad,' I suppose I am hardly an unprejudiced judge. There are times, I confess, when I feel very mad. The Arab who squats all his life in his hut and says, 'Kismet,' deems all Englishmen mad; and to the *Sporting Times* young man anyone who thinks with his brain must appear quaint."

CORRESPONDENCE.

SPREAD OF OUR CAUSE.—NEW OHIO SOCIETY.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Dr. H. V. Sweringen, one of the faculty of the Fort Wayne College of Medicine, having delivered a lecture on Louis Pasteur to the students of that institution, extracts were published (May 9th, 1896), in an Ohio paper, called the *Light of Truth*. The remarks were in the usual laudatory vein, and Miss Reed (our treasurer), having read the article, replied to it, showing up Pasteurism, in about three columns, in a way which we all think very able and conclusive. This letter was printed at once, and almost immediately drew out an answer from Dr. Sweringen, entitled "Vivisection Vivisected"; in which the medical gentleman ran rather off his subject, tried to make Miss Reed personally responsible for all the horrors of the Inquisition, and also spoke of many animals as "entering intelligently into the spirit and intent of their vivisection." Miss Reed replied, and stated, among other things, that "if animals are possessed of an intelligence which would enable them to enter into the intent of their vivisection, then that vivisection would be nothing more or less than actual murder." Before this letter reached the paper, a good answer to Dr. Sweringen's letter was printed, signed only by initials; and later Miss Reed's communication came out. We have not since heard from Dr. Sweringen, but a Mrs. F. H. Stow, of Conneaut, Ashtabula Co., Ohio, wrote to Miss Reed, thanking her for her defence of our dumb friends, and asking what the anti-vivisection movement is; how carried on, etc.? Several letters have passed between this inquirer and our treasurer, and we were astonished to learn a few weeks since, that Mrs. Stow has decided to start an Anti-vivisection Society in her own State, and has already about three dozen supporters. It is a delightful thing in itself, and we are naturally particularly pleased that it should have been initiated by our treasurer, through her newspaper articles.—Faithfully yours,

ANNA SARGENT TURNER,

Secretary New York State Anti-vivisection Society, Saugerties, N. Y.

Saugerties, N. Y., Dec. 14, 1896.

THE NON-EMPLOYMENT OF PRO-VIVISECTIONIST MEDICAL MEN.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—In your last month's issue, in giving the text of the pledge not to employ a vivisector as medical attendant, you commented upon difficulties which might lie in the way of including pro-vivisectionists in such a pledge. I think it may interest you to learn not only that this pledge has been largely circulated and signed during the past three weeks in London, but also that many signatories have voluntarily added a clause pledging themselves, in addition, never to employ a pro-vivisectionist as medical attendant. This, I think you will agree with me, is a sign of the times that no member of the medical profession can afford to disregard.—Believe me, to be courteously yours,

FRED. E. PIRKIS.

The High Elms, Nutfield, Surrey,
18th January, 1897.

VIVISECTION v. STEAM.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—A medical student has written to me as follows:—"In your lecture the other evening you said 'that vivisection was not indispensable to the progress of physiology,' neither is steam indispensable to the work of the world, but what would it be without it?" This argument is subtle; but if I mistake not, quite fallacious. The analogy is by no means complete. We see in a thousand ways what steam can do to lighten the labour of the world. Can any one point to a single indisputable instance in which vivisection has lightened the suffering of the world? Assuming steam never to have been discovered, would not the mind of man have discovered other aids to his labour? Indeed he has already done so, and there are no

moral objections to the use of steam. Assuming vivisection to have been a means of discovery, would not the mind of man have made by other unobjectionable means such discoveries as are indicated in the volume of "Biological Experimentation," by the late Sir Benjamin Ward Richardson, who distinctly states that vivisection is not indispensable? At best, the medical student's argument is an appeal to human selfishness and cannot be for the lasting benefit of men.—I am, sir, yours truly,

T. A. WILLIAMS.

Bristol, 16th January, 1897.

THE TUBERCULIN TEST.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I have been reading with very much interest a recent paper by Professor McFadyean on the subject of this test. I am somewhat surprised at the author's dogmatism. Here we have Professor McFadyean asserting that the test "is absolutely harmless and devoid of danger." On the other hand, Professor Brown, a good authority, says:—"It has been proved that one effect of inoculating animals with tuberculin has been in some cases that of distributing the tubercle bacillus to parts of the body not previously affected." Well, perhaps that is not, after all, a very important objection!

I think no sensible person will venture to deny that there is an ever-present danger in all inoculation processes with animal diseases. Take, for instance, the inoculation systems of Pasteur, Koch and Roux. The list of failures after anti-rabic inoculation now amounts to 334 persons, and the evidence is conclusive that in many cases the deaths were the result of the treatment. (The vapour bath of Dr. Buisson is evidently an unqualified success.) The anthrax "vaccine" has been prohibited in Hungary after an extensive test which brought about the death of thousands of animals. The result of the use of Koch's "cure" was that patients on whom it was employed frequently succumbed. And the serum antitoxin is in no better position, for, not only has it in many cases killed of itself, but, despite a most extensive use of and experiment with the serum, diphtheria is simply raging in the metropolis, and medical men are helpless to check its spread by any such means. Already experts in "preventive medicine"—who are, it is needless to say, fully in sympathy with modern discoveries in anti-toxins and vaccines—are finding out the shortcomings of tuberculin, and we may hope soon to find that that test has been "pressed" by interested professors. There are many signs that in this, as in other kindred matters, medical sanitarians are in what the *Medical Press* has properly called a "hot-fit." They are imploring all and sundry to make use of the new test, and not to delay it until the Government forces it upon them. This was the burden of their cry at the late Sanitary Congress. But the Government is hardly likely to enforce any such thing. The Government was asked to make the vaccination of animals against anthrax compulsory. They did not do so, wisely as I think; and now the Board of Agriculture, having taken into consideration much expert evidence and general observations, declines to recommend the anthrax vaccine.

I must confess that there is little technical evidence of worth against tuberculin. The fact is, it has had no very lengthy trial, and no valuable results can be obtained except on the most extensive test and survey. But if such an objection as this applies at all to a note of warning against a practice which is revolting to the common-sense of a large body of people (who, as consumers of milk, butter, and meat, are the people most concerned), and which in the meantime may work considerable and irremediable harm, how much more justly must it apply to the dogmatic assertion of Professor McFadyean?

The following extract is from an article in the *Farmer and Stockbreeder* of October 26th, 1896. It is dead against dogmatism, and very much in sympathy with my own remarks. I therefore transcribe it with much pleasure. Perhaps the writer foretells the "beginning of the end":—"Many writers," he says, "not usually given to the advocacy of impracticable suggestions, have become extremists on the question, and call upon the Government to do this, that, and the other thing without, in the first instance, recognising the fact that the use of tuberculin is merely in an experimental stage. The agnostic

in these matters seems to us the most reasonable of them all. He is willing to credit tuberculin with all we know about it, but he says in effect there is no evidence of the results which follow its use on a healthy animal. It seems to us, therefore, that until this knotty point is solved it is unwise to test any but suspected animals." Faithfully yours,

JOSEPH COLLINSON.

79A, Great Queen Street, London.

December 6th, 1896.

A DÉFENCE OF VIVISECTION ANSWERED.

An old and experienced medical man of the locality, Dr. Cooper Rose, having ventured on a defence of Vivisection in the columns of the *Hampstead and Highgate Express*, in the issue of that journal for December 26th, the following replies appeared:—

"SIR,—Your correspondent, Dr. Cooper Rose mentions three surgical operations, the success of which he attributes to vivisection, and 'which indicate the immense advantages which the human race has derived' from that practice. With your permission I would like to point out that his examples are unfortunate, as a study of medical history abundantly proves.

"Dr. Rooke says that after the spleen had been successfully removed from a dog it was proved that life could be sustained when the organ was extirpated. The medical writers of the Talmud discovered that the removal of the spleen from the human subject is not necessarily fatal.

"It is true that in 1670 Robert Boyle and Dr. Jolive removed the spleen from a living dog, and others did so in many cases successfully; but this did but little to make the operation a safe one in surgical practice. The successful surgery of the spleen is entirely due to practice on the human subject. The *Medical Annual* for the present year gives the death-rate for the last three decades thus:—

1866—75 75'00 per cent.

1876—85 59'25 per cent.

1886—95 16'21 per cent.

However successful the operation may have been on the dog who lived for two years without his spleen, we know that from 1866 to 1875 three persons on whom it was performed died for every one who recovered.

"Your correspondent next refers to the operation for the removal of an impacted gallstone as a discovery due to vivisection. Now it is well known to surgeons that patients have survived stab or bullet wounds of the gall-bladder. This would naturally suggest the success of the operative measures which, in consequence of the increased boldness of abdominal surgery, are now so frequent. Prof. Lawson Tait, perhaps our most distinguished operator in this class of cases, recorded in 1889 fifty-five cases of such a method of relieving the malady, with fifty-two recoveries. In a letter addressed to myself on October 9th, 1889, he says:—"You may take it from me that, instead of vivisection having in any way advanced abdominal surgery, it has, on the contrary, had a uniform tendency to retard it. This I show to be particularly the case in operations upon the gall-bladder, and refer you to the current number of the *Edinburgh Medical Journal*, where in an article I point to the fact."

"Ovariectomy is Dr. Rose's trump card in favour of experiments on animals; but Dr. Clay, of Manchester, who successfully performed the operation fifteen years before the vivisectionists turned their attention to it, said in the *British Medical Journal*, July 17th, 1880, p. 110:—"In my opinion vivisection has no more to do with advancing the success of ovariectomy than the Pope of Rome." Ovariectomy is Dr. Clay's own operation, his success was brilliant, and no vivisectionist can rob him of his claim. As for the original discovery, it is well known that it was due, not to any scientist at all, but was first performed in Europe by a simple sowgelder in Germany in 1517, who successfully removed the ovaries of his own daughter.—Yours, etc.,

"December 5th." "EDWARD BERDOE, M.R.C.S., etc.

"SIR,—The letter in defence of vivisection published in your issue of December 5th is plausible but inaccurate, and it is

likely to mislead the public by holding out delusive promises and omitting all reference to the serious evils of this method and the dreadful consequences which may ensue from it. Vivisection is a cruel and demoralizing practice, which cannot fail, sooner or later, to harden the hearts and blunt the sensibilities of all who are concerned in it. This may be denied, but the slightest knowledge of human nature is sufficient to prove that the habitual performance of cruel acts must render the performers callous and cruel, and this is abundantly proved by the evidence of the experimenters themselves, both in this country and abroad. Moreover, the passion for experimental research has diverted attention from clinical and pathological observation, has led to erroneous deductions, and has rather retarded than advanced the progress of medicine and surgery.

"But these evils are trifling in comparison with the consequences which may ensue from the extraordinary increase and development of this mode of investigation. The results of the vivisection of animals have hitherto been so doubtful, and the conclusions drawn from them so contradictory, that a desire has arisen, and has found expression in some quarters, that these experiments should be repeated upon living human beings! That this is no imaginary danger is plainly shown, not only by the utterances of various vivisectioners, but by the recent attempt to pass through the Ohio Legislature a measure intended to legalize the vivisection of capitally sentenced criminals. Such legislation may come to pass even in this country, unless the people can be aroused to a sense of the impending danger, and take steps without delay to avert it. These statements may be received with incredulity; yet human vivisection is no novelty, but was practised largely in ancient times, especially by the Greek and Alexandrian physicians. Persons whose sensibilities have been destroyed, and whose minds have been corrupted by a lust for knowledge at any price, and a morbid curiosity which is absolutely insatiable, would be quite ready to vivisection human beings if they dared, and they are only prevented from doing so now by fear of the law and public opinion. Should the practice of vivisection go on increasing as it has done during the last twenty or thirty years, the public conscience (already rather dull) may become quite accustomed to it, public opinion may gradually change, and the law may be altered so as to legalize human vivisections. The obvious conclusion is that a practice which may be followed by such consequences is too dangerous to be tolerated any longer, and that vivisection should therefore be prohibited under heavy penalties.

"Yours, etc.,

"J. H. THORNTON, M.B., B.A.

"Deputy Surgeon General, I.M.S., Retired,

"49, St. Charles' Square, W., December 7th."

"SIR,—Dr. Rose's letter in defence of vivisection is calculated to mislead popular opinion on an important subject, to the study of which he has apparently given but little attention. In the report of the Royal Commission it was distinctly stated that 'the practice is from its very nature liable to great abuse,' and also that 'it is not to be doubted that inhumanity may be found in persons of very high position as physiologists.' The whole literature of the vivisectioners teems with evidence of the truth of these statements. The animals are starved, suffocated, heated in ovens till they die, mutilated in the most shocking way—their internal organs are laid bare and experimented on, the most sensitive nerves are stimulated with electricity, their brains are exposed and mutilated and the creatures kept for weeks with half their faculties destroyed; they are inoculated with all manner of painful diseases from the furious form of rabies downwards, and allowed in many cases to linger for months in pain and misery. In fact, almost every imaginable kind of torment is inflicted on them in the name of science. From the very nature of the experiments it is obvious that a large part of them—and these often the most painful—cannot be made under chloroform or other anæsthetic.

"A witness before the Royal Commission, being questioned as to the proportion of experiments in which anæsthetics could not from their nature be used, replied, 'I should think about half the experiments I have done.'

"It is not true either that experiments are made mainly with

a view to medical treatment and 'for the welfare of the human race.' The most prominent champion of the vivisectional method in England says that 'after the furtherance of science that is the noblest object we have in view.' And the same gentleman politely informed us that those who demand some practical benefit from vivisection are 'an evil and adulterous generation that seeketh after a sign'—a sign which apparently will never be given.

"I wish Dr. Rose and other practitioners who defend the practice could be induced to examine the facts of the case instead of trusting to the *ex parte* statements of interested persons in the medical journals. I am sure they would be greatly horrified to find out what it really is that they are supporting, impelled by a mistaken *esprit de corps*.—Yours, &c.,

"ERNEST BELL.

"2, Thurlow Road."

"SIR,—Will you permit me to say a few words in reply to the claims for vivisection, as a means of arriving at correct methods of surgical treatment, put forward by Dr. Cooper Rose in your valuable paper on December 5th? They are three:—1. Removal of the spleen. 2. Removal of impacted gall stones. 3. Ovariectomy.

"With regard to the first, Dr. Rose writes:—'The most daring surgeon did not venture to operate for its removal until the operation had been successfully performed on a dog (of course under chloroform), and it was proved that life could be sustained when the organ was removed.' Now, seeing that O'Brien successfully removed the spleen from a man, in the year 1814, i.e., thirty-two years before the introduction of anæsthetics, it is clear that Dr. Rose is at fault in connecting this dog with the successful operation on the human patient at all.

"2. The operation as now performed for gall stones does not depend for its success on vivisection, for Mr. Lawson Tait, who first successfully performed it, had never heard of vivisectional experiments on the matter when he treated and cured his first case. And fortunately, for, seeing that, in the said vivisectional experiments, the mortality was 70 per cent., the most daring surgeon could hardly have ventured to transfer such an experiment to the human subject.

"3. Ovariectomy. About the year 1882 the *British Medical Journal* wrote that, in the operation, Mr. Lawson Tait had gone ahead of all previous operators, and had, in fact, opened up quite a new era. Well, I have myself heard Mr. Tait state that he did this by throwing over all the data derived from vivisection—in fact, he affirmed that the vivisections to which Dr. Rose alludes threw back the operation twelve years.

"As these are historical facts, on the correct knowledge of which the lives of men and women may depend, I trust to your courtesy and kindness for allowing me space in your columns for this letter.—Yours, etc.,

"A FORMER NURSE."

HOME INTELLIGENCE.

BRISTOL.

At the opening meeting of the Harrington Hall Mutual Improvement Society early in January, an address on "Anti-Vivisection" was given by Miss E. F. Evans. At the close of the address several questions were asked and answered by the lecturer. A resolution condemning vivisection was carried unanimously.

During the last few weeks Mr. T. A. Williams has addressed several societies upon the vivisection question, and discussion has followed in most cases. Lectures, inculcating justice and mercy to animals, have been given in St. Luke's Church School-room, Brunswick Congregational Chapel, Club House, Broad Street, St. Philip's, and the Welcome Coffee Tavern, Midland Road. At these meetings lantern slides have been used through the kindness of Mr. Ernest Bell and the Ladies' Committee of the Bristol Branch of the Society for the Prevention of Cruelty to Animals. A movement is in progress in Bristol among the Sunday School teachers and Band of Hope workers, by which it is intended to arrange for the

systematic teaching of mercy principles to the scholars and members.

BRIGHTON.

The "Modern Inquisition" was the title of a lecture given by Mr. A. Westcott, of London, at the Y.M.C.A. Lecture Hall, on Thursday evening, December 17th. Mr. Wall presided. The lecture consisted of a vigorous denunciation of vivisection. Mr. Westcott commented unfavourably upon the fact that there were only two inspectors in connection with vivisection in England, and one of these, he maintained, was on the side of the vivisectionists. When they were told that there was no cruelty practised they must remember that physiologists had a very peculiar definition of pain, and, when they found men denying that animals could suffer pain, they knew how much to rely upon their statements. With regard to anæsthetics, it was difficult and almost impossible to place several kinds of animals under chloroform, and out of 4,676 experiments, which were made last year in England, about two-thirds were, by the admission of the vivisectionists themselves, performed without the use of any anæsthetic whatever. The lecturer also mentioned that there were three firms in this country engaged in the manufacture of the instruments used in performing operations upon animals. The lecture was illustrated by a number of highly realistic limelight views.

EDINBURGH.

We are by no means sorry to see that among Professor Rutherford's class of students there are some who will not have vivisection and its atrocities forced upon them. A number of young men have banded themselves together as "Medical Christians," and when vivisection begins in the class-room they are seen to walk out.

MEETINGS OF THE SCOTTISH SOCIETY.

On Tuesday, December 8th, a meeting was held at Viewforth House. The Rev. John Baird presided, and together with Rev. L. F. Armitage, General Grant, and Colonel Waterston, addressed the meeting.

On Tuesday, December 15th, the monthly prayer meeting was held in the Bible Society's Rooms, 5, St. Andrew Square. Mr. James Wilson, a missionary, presided.

A meeting was held at Mrs. Dovey's, Greenhill Place, on Tuesday, the 12th January, the Rev. John Baird presiding, and there was a large attendance. Surgeon-General Watson gave an address on "The Uselessness of Vivisection." The Rev. R. Henderson, Major-General Grant, Mrs. Campbell, and Colonel Waterston also took part.

A prayer meeting was held in the Bible Society's Rooms, 5, St. Andrew Square, on Tuesday, the 19th ult., the Rev. William Allan, M.A., presiding.

THE ANNUAL MEETING OF THE SCOTTISH SOCIETY.

The annual meeting of this Society was held on Wednesday afternoon, the 20th ult., in the Bible Society's Rooms, Edinburgh. The Rev. John Baird presided over a good attendance. Col. Waterston, Hon. Sec., submitted the annual report and abstract of accounts. The report stated that the Society had maintained its various educational agencies in vigorous operation. Literature had been widely circulated, and meetings and conferences had been held in the larger towns. Reviewing the proceedings of last year, it was remarked that hostility against scientific cruelty was becoming more widespread, and incredulity deepening respecting the medical claims advanced in its justification. In conclusion, the report stated that every well-wisher, not only of the lower creatures, but of his country and mankind, must deplore the prejudiced position of the medical profession, and regret that the severe lessons of disaster and disappointment taught in the past had failed to detach it as a whole from a method of investigation so offensive to moral feeling, and so worthless in reliable results. The treasurer's statement showed that the income met the expenditure with the exception of £16 7s. 6d., which had been drawn from the reserve fund.

The Rev. J. BAIRD, in moving the adoption of the report, referred to the annual meeting of the court of contributors to

the Edinburgh Royal Infirmary held on the previous Monday, and took occasion to endorse what Mr. Turnbull Smith on that occasion said on the question of the constitution of the Board of Management. It was one of the contentions, the Chairman said, associated with the anti-vivisection movement, that the great end of our hospitals was cure and not experiment, and that they were maintained by charity, not in the interest of the medical staff, but in the interests of the suffering patients. In carrying out this reform there lay an important check to experimentation, and had there been in their hospitals a separation of the medical staff from the responsible management, it was hardly likely that the experimentation of a few years ago would have been permitted on such a reckless scale as then obtained. (Applause.)

The motion was seconded by W. C. MAUGHAN, Esq., J.P., Glasgow, and agreed to.

Surgeon-General WATSON moved a resolution similar to the one passed at the annual meeting of the Victoria Street Society, declaring that Vivisection ought to be prohibited. He maintained that the whole system carried on in the Pasteur Institute was misleading, and could only end in failure, and the establishment of such an institute in this country ought to be resisted in the interest of the healing art itself. (Cheers.)

This motion was seconded by General GRANT, and agreed to.

The Rev. WM. ALLAN, M.A., moved the election of the office-bearers for the year. In so doing he referred to a report which appeared recently to the effect that a number of the medical students at Edinburgh University had banded themselves together in the resolve to leave the physiology class-room whenever any vivisection practice was carried on. Professor Rutherford, he said, was naturally very angry, but it was something to know that some of their young men felt the position so keenly, and he hoped that in the course of time the majority would become a minority, and that an absurd method of research would be cast aside altogether. (Applause.)

Mr. G. McROBERTS, City Missionary, seconded.

The Rev. Mr. ARMITAGE, J. H. CUNNINGHAM, Esq., and Mr. WHITE, also spoke, and the usual votes of thanks were awarded at the close.

GLASGOW.

On Tuesday, December 8th, the monthly prayer meeting was held in the Protestant Alliance Rooms, 12, Argyll Arcade, the Rev. J. W. Mitchell, presiding.

On Thursday, December 17th, a meeting was held at the residence of Mrs. Melville, Bank Street. W. C. Maughan, Esq., J.P., presided over a good attendance. The Chairman, the Revs. Wm. Allan, M.A., Dr. Kerr, and J. W. Mitchell, and Colonel Waterston were the speakers.

A prayer meeting was held in the Protestant Alliance Rooms, 12, Argyll Arcade, on Tuesday, the 12th ult., W. C. Maughan, Esq., J.P., presiding.

There was a meeting at 347, Langside Road, on Thursday, January 21st. The chair was taken by Mr. H. A. Long, there being a fairly good attendance. The Rev. Mr. Armitage delivered an address on "Our present position." The Rev. Mr. Stewart and Colonel Waterston also took part.

FOREIGN INTELLIGENCE.

PARIS.

DEATH OF DR. DÉCLAT.

The death of this gentleman, the real discoverer of the anti-septic properties of carbolic acid, and a letter as to whose claims (from the pen of Dr. John H. Clarke) was quoted in a recent issue, was announced on the 28th of November. The popularising of phenic treatment at the Paris "Maternité," it is said, almost immediately brought down the death-rate from twenty per cent. to twenty per 1,000 patients.

THE QUEEN OF PORTUGAL AT THE PASTEUR INSTITUTE.

The Queen of Portugal is sure to be used as an advertisement for the Pasteur Institute. She went the other day to that establishment for the sale of germs, toxins, vaccines, and what not. In handling the tubes of toxins she committed herself to the opinion that Dr. Roux's horse serum is a sovereign cure for diphtheria. It takes seven years of the

hardest study in Paris before a medical student is qualified to speak on so grave a matter. The Queen of Portugal has attended clinical lectures and acquired much useful knowledge in doing so. But could her studies be anything but superficial? She is too well off for strenuous and long-sustained application; and then she has to discharge regal, maternal, and social duties that take up much of her time. Some of the greatest medical authorities in France are not sure about the Roux serum.—*Truth*, Nov. 5th.

MADNESS FROM ASSOCIATION WITH HYDROPHOBIA.

The Paris correspondent of the *Daily Telegraph*, under date of January 7th, reported the following remarkable case:—"A lady named Chevallier, who lately accompanied her two children to the Pasteur Institute, where they were inoculated against hydrophobia, has gone mad. She comes from Avenières, in the Isère, and her children, not herself, were bitten by a mad dog towards the end of December last. According to the version of the affair given out, Madame Chevallier was extremely affected by the accident which happened to her young ones, and was also annoyed at the prices charged in the hotel wherein she was staying while attending the Institute in the Rue Dutot. She accordingly wrote to her husband, who came to Paris last night, but before his arrival she lost her reason, and attempted to bite everybody who approached her. On seeing her husband, however, the woman calmed down. This morning she asked him to take her to the Church of Notre-Dame des Champs, and he complied with her request. Hardly had they entered the edifice when Madame Chevallier had another fit of insanity, began to cry out that she was mad, and bit the left arm of one of the policemen whom her husband called to his assistance. The woman was first conveyed to the police station, where she broke windows, and had to be tied down for transfer to the lunatic's department of the dépôt."

UNITED STATES.

STUPID EXPERIMENTS.

Another lot of stupid experiments have recently been conducted in the State Pathological Institute, New York, to ascertain the nature of so-called sunstroke, blood from a human victim being injected into the veins of rabbits—and thereupon the rabbits died. The doctors do not seem to know yet what sunstroke is—unless it be poison in the blood superinduced by excessive heat. This is what we always supposed it was. The most ignorant fish-woman understands this, only she cannot put it in scientific language. It has always been known, too, that sunstroke needs cooling applications. It doesn't require more poison of some kind injected into the system to cure it, nor the poisoned blood of sunstroke victims injected into animals to find out that it is a fever induced by intense heat. The vivisection branch of the medical profession is a vast success in making much ado about nothing.—*Anti-Vivisection* (November).

A NOTABLE RECRUIT.

It is cheering to learn that there is yet another noble and gifted adherent to the anti-vivisection movement, for Mrs. Elizabeth Stuart Phelps Ward in "A Novelist's Views of Novel Writing," which appeared in the November number of *McClure's Magazine*, gives as one of the articles of her creed the following:—"I believe that the urgent protest against vivisection which marks our immediate day, and the whole plea for lessening the miseries of animals as endured at the hands of men, constitute the 'next' great moral question which is to be put to the intelligent conscience, and that only the educated conscience can properly reply to it."—*Journal of Zoophily*.

THE ANTI-PASTEURIAN CONTROVERSY.

In the *Public Ledger* of Philadelphia on New Year's day, Mrs. C. Earle White wrote a letter, in which she stated that in the previous day's issue of that journal she had noticed an account of "the recent melancholy cases of hydrophobia in Baltimore, mentioning that out of eight boys who were bitten by the rabid dog and taken to the Pasteur Institute for treatment, three have since died of the disease, and the others are not yet out of danger." *Apropos* of these facts, Mrs. White goes into details in regard to the failures of the Pasteurian method, and announces the adoption of the Buisson system of treatment, i.e.

by vapour baths, in two Institutions of Philadelphia. The Editor evidently attached importance to this announcement, as he sent a reporter to interview Mrs. White, and obtain further particulars of the Buisson treatment, and these he also published in his paper.

ANNUAL MEETING OF THE NEW ENGLAND ANTI-VIVISECTION SOCIETY.

IN A FLOURISHING CONDITION.

At the annual meeting of the New England Anti-Vivisection Society, lately held at its offices, 179, Tremont Street, Boston, Dr. Philip G. Peabody, A.M., LL.B., was re-elected president; Dr. E. Preston, vice-president; Mr. Joseph M. Greene, treasurer; Miss Helen Willard, secretary, and the above, with Mrs. Margaret Sunderland Cooper, were chosen directors for the ensuing year. Reports were submitted which showed that, notwithstanding adverse circumstances, the affairs of the Society are in a thoroughly satisfactory condition. It has printed and circulated during the year about 200,000 pamphlets. Its membership is about 700. Its income was nearly \$2000. All the officers of the Society have given their services without pay, which is not the case with any other humane Society in the State. The Society is publishing a monthly magazine, and is endeavouring to induce Mr. Arthur Westcott, an English lecturer on vivisection, to undertake a campaign in America.

GENOA.

THE RESCUE OF STRAY DOGS FROM THE LABORATORIES.

We are indebted to some kind friend on the spot for a copy of the *Gazzetta dei Dibattimenti*, of Genoa, of the date of December 19th, from which we take the following important information:—

"The distinguished barrister and publicist Signor Cornelio Carpineti, known among the writers on sport under the pseudonym of "*Sylvius*," president of the *Federazione Cinegetica Ligure* and of the club *Caccinitori Liguri*, has received a letter from the Zoophilist committee, which we publish with pleasure, for it deals with a question of humanity and civilization well worth the attention of our readers. We may point out for the sake of those who might otherwise be unaware of it, that the petition spoken of in this letter relates to the new regulations on the ownership and wandering of dogs:—

"Genoa, December 18th, 1896.

"The Committee having heard of the petition written by you as a representative of the several respectable societies of which you are the president, with the object of obtaining from the municipality of the town of Genoa the cessation of the disgraceful practice of giving up to physiological laboratories the dogs seized in the streets, cannot refrain from applauding the feelings of justice and charity by which you have been actuated.

"Probably you do not forget the fact that this Committee waged, some years ago, a stubborn war for this principle and won the victory. The illustrious General Enrico Parodi, who was then at the head of the municipality, ordered that the handing over of dogs so much objected to should cease, believing that he had neither the duty nor the right to give up to such barbarous torments the innocent animals caught for infringements of the regulations; and if our success was then a transitory one, and was reversed subsequently to the resignation of the gallant general (which he tendered for other reasons), it does not follow that so just a cause cannot win the victory again, especially if defended by patrons as firm and courageous as you.

"The President, MASSONE."

INDIA.

THE CALCUTTA SOCIETY.

The Hon. Mr. Justice Gordon, of the High Court, Calcutta, has consented to become a patron of the local Anti-vivisection Society. It is proposed to hold a meeting shortly to present a memorial to the Government of India.—*The Queen* (Calcutta), Dec. 21, 1896.

THE BOMBAY SOCIETY.

Mr. M. R. Mehta, the Hon. Secretary of this Society, writes informing us that it is working its hardest in carrying on

agitation on the subject of "Pasteurism in India," one of the burning questions of the day. The Society is now established on a firm basis, and has already collected considerable funds. The committee consists of a large number of respectable gentlemen of all classes and creeds. Mr. Mehta sends us a summary of the meetings held by the Society in the city of Bombay and in various important towns of the Presidency in the last few months.

The first was, as reported in our last issue, a large and influential meeting of the members of the Jain Community of Bombay, held in the large hall of Stanik Nasi Jain Institute at Chichpoogly, on Sunday, the 25th October, 1896. Mr. Lakhamsey Napu Nensy, J.P., a leading gentleman, presided. Messrs. Mansukhlal R. Mehta, Amerchand P. Parmar, C. L. Parekh, and several other speakers addressed the meeting against vivisection, and specially against Pasteurism, in India. A fund was started there and then, a large amount being subscribed on the spot.

On Thursday, the 9th November, a public meeting was called by the Society in the hall of Mulji Jetha Kapad Bazar, which was presided over by Gowswamy Shri Devkinandana Acharya, a well-known and highly educated religious head of the Valabhacharya sect of Hindoos. Mr. M. R. Mehta read an interesting and impressive paper on the subject of "Pasteurism, its moral and religious aspects." Several other speeches followed. The question of the day was fully discussed, and the audience was much moved and grieved to learn that, if what is said be true, a Pasteur Institute will be established in India by the aid of the Government. The concluding remarks from the President appealed to the religious feeling of the people against the most unpopular proposal. A hearty vote of thanks to the lecturer and the president was carried by acclamation before the meeting dispersed.

A crowded meeting was held in the premises of Madhane Bag on Sunday, the 29th November, 1896, under the auspices of this Society. Dr. Bhalchandru K. Bhatuadekar, L.M., J.P., and a Fellow of the Bombay University, the ex-chief medical officer of the Baroda State, and one of the leading medical men of the city of Bombay, was voted to the chair. The Chairman, in opening, spoke on the subject of Pasteurism in India, and declared emphatically that India did not need a Pasteur Institute. Dr. Popat Parbhooram Vaid, L.M. and S., Messrs. Amerchand P. Parmar, M. R. Mehta, Dharamdas Bhagmandas, Sadhlav, Page, and other speakers made remarks on the question from various points of view, and a condemnatory resolution was unanimously passed. It was also resolved to send the resolution to the Governments of India and England with the signature of the President. A vote of thanks to the chair ended the proceedings.

A public meeting was called by the Arya Samak in the beautiful Hall of the Samaj, when Mr. C. L. Parekh delivered a lecture on the "Anti-vivisection Movement." Mr. Senaklal Karsondas, the president of the Arya Samaj of Bombay, was in the chair. The subject was well elucidated by the lecturer.

At Surat, in the Bombay Presidency, a crowded meeting was held at Vithulenady on the 7th November, 1896, of which a report was given last month.

PATAN.

The large meeting of the Mahajan of Patan, was held in the open-air, where hundreds of people collected, on the 25th November, 1896. Mr. Hemchand Vasta, the Naggarsett of the town, was requested to take the chair. Several speakers gave addresses on the subject, and similar resolutions as at Surat, Broach, etc., were passed.

VISNAGGAR.

On the 29th of November, 1896, a meeting similar to that of Patan was held at Visnagar under the presidency of Mr. Nanabhai Gokaldas. Resolutions to the same effect were passed.

RUSSIA.

DISGUSTING AND CRUEL EXPERIMENTS.

The following appears in the December number of the *Thier-und-Menschenfreund*:—"In the *Centralblatt für Allgem.*

Pathologie, &c., Dr. D. J. Timosejewsky, of St. Petersburg, in writing upon the question of the regeneration of the red blood corpuscles, states that, 'the facts which I now make public, were observed by me in my experiments upon twenty-nine full-grown dogs and rabbits. The susceptibility of these animals to septic poisoning increases very much the difficulty of carrying out the experiments. I used Nægeli's fluid, infused with the bacteria of decomposition, and some of the same fluid which had become self-decomposed. In two experiments on dogs I used ordinary fluid in a state of decomposition, and obtained the same result as with the Nægeli fluid, but the effect of the latter was greater. Even with small doses, death ensued in the first two cases, in from ten to twenty-three hours. In five other cases, when a smaller dose was used, the animals showed signs of recovery, but grew weaker and weaker under the repeated experiments. The symptoms are, vomiting, fever, and heavy breathing. In order to count the number of nucleated red-blood corpuscles, the animals were bled, blood being taken partly from the crural, and partly from the splenic artery. In all cases the blood corpuscles were counted. The red, white, and red nucleated corpuscles differed considerably in number. The most remarkable thing was the rapidity with which red nucleated corpuscles appeared after the introduction of the fluid into the blood circulation of the dogs.' All this is set forth in the most learned manner, but one seeks in vain to find any intelligible object for which these cruel experiments were instituted."

"In the same journal (*Centralblatt*), Dr. W. Niederswiodzki, of Moscow, in a report on the changes produced in a rabbit by one-sided vagotomy, says that in experimenting upon four rabbits, he cut away from each of them about an inch of the vagus nerve of one side only. After two months suffering one rabbit died. The others served to confirm the results of similar experiments carried out by D. G. Durdufi, viz., that the vagotomy caused hæmorrhage of the lungs, the blood being rich with red corpuscles. The inflammation of the lungs thus produced received the name of *pneumonia hæmorrhagica*. Red blood corpuscles were also found in the trachea. The long report concludes as follows:—"All this supports the view that one-sided vagotomy interferes with the nourishment of, and sets up "tragic disturbance" (inflammation) in the breathing organs. Surely it is quite clear without any experiment—and there had been more than enough experiment already—that the severing of so important a nerve as the *vagus*, would, by deranging the vital functions, interfere with the nourishment, and by the stagnation of the blood in the capillaries bring about inflammation."

THE Pasteur Institute intends to use its windfall "in the fight against death." I suppose it is useless to ask exactly what is meant by this. If it means the torturing of innumerable animals—their vivisection without anæsthetics, the shambles may be less revolting than the biological department of the Institute.—*News* (London), January 15th.

THE late Lord Shaftesbury was one of the most earnest devoted, and eloquent leaders of the party of Anti-Vivisectionists, and it is a pleasure to see how his utterances on the subject are in complete accord with the views entertained by the bulk of the Hindu community regarding it. The Anti-Vivisectionists in England were so far successful in their object by means of persistent agitation that the cruelties which the Vivisectionists could inflict on animals were restricted and brought within certain bounds. Now that Vivisection is going to be introduced in India, the Indian Anti-Vivisection Society has a mission to perform on behalf of the dumb creation. Under the vigilant eyes of such a body, the Vivisectionists in India will have to be a little merciful to their poor victims, while, by continued agitation, the Society may hope at some future time to practically abolish the system which may obtain in India. All Hindus, Jains, and Buddhists will agree with Lord Shaftesbury in holding that Vivisection is "the meanest of all crime, and the greatest of all sins against a merciful God," and must, therefore, be conscious of their duty to afford every possible support and countenance to the Indian Anti-Vivisection Society.—*Indian Mirror*, November 29th, 1896.

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UNITED WITH THE

International Association

FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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Telegraphic Address: "Zoophilist, London."

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 11.]

LONDON, MARCH 1, 1897.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Right Rev. Bishop Ingham, late of Sierra Leone, has joined the Victoria Street Society, and been elected a vice-president.

DR. MATTHEWS DUNCAN called the antiseptic treatment "transcendental cleanliness." This is just what it is and nothing more at best. Vivisection no more helped us to discover the virtues of cleanliness than it has helped the dairymaid to make good butter.

As Her Majesty's Diamond Jubilee is a deeply interesting event, and as Anti-vivisectionists are not less loyal than other people, it will not be inappropriate to transfer the following letter of Miss Cobbe's from the *Times* of the 15th ult., to our own columns:—

"VICTORIA THE GREAT."

"SIR,—The only woman on whom the title of 'great' has hitherto been conferred is that far from exemplary personage

Catherine II. of Russia. I suggest that it would be no more than historical justice to the splendid sovereignty of our Queen if, on the occasion of the 60th year of her glorious and beneficent Royalty, she should be hailed by Parliament and people as Victoria the Great, and a column, such as that of Trajan or Antoninus, set up in London to commemorate the decree of the *Senatus Populusque Britannorum*."

"ETHICS," says the *British Medical Journal* "is within sight of being regarded as mechanically as the phenomena of electricity," etc. A reviewer of a work on psychology condescendingly admits that transcendentalism serves "to keep the ground in cultivation until the physiological husbandman shall come." The new moral law will then be given to man, not from Sinai, but the animal torturer's laboratory. A fine prospect for our race. They tried something of the sort in the French Revolution.

IN the "Life of Archbishop Magee" there is a curious proof of the heartlessness of scientific men unconsciously displayed. The Archbishop once read a paper on "Hospitals for Incurables," in which he propounded the following problem:—Given an old woman afflicted with incurable cancer, should she be provided with every comfort till death; be left alone; or mercifully despatched? Some of his hearers, amongst whom were Professor Tyndall and Mr. Greg, not believing that his Grace was not serious, calmly adopted his *reductio ad absurdum*, and were for killing the old woman!

DR. GEORGE GOULD, in his new book "Borderland Studies," has a chapter on "Vivisection," in which he adopts the usual medical style of dealing with our question, but he examines the truth at the back of our position, and is prepared to grant that, in a not sufficiently understood way, every living being is to some extent his brother's keeper, dependent and interdependent on the well-being each of the other. This is something, and we think the doctor would go further were it not for professional prejudice.

LORD REAY seems to have held a brief for the experimentalists in the House of Lords on the 15th ult., in making his speech on inoculation against the bubonic plague in Bombay and other parts of India. He recounted the whole story from the bacteriological point of view, and painted it in roseate colours. The evidence, however, in favour of the efficacy of the anti-toxic inoculations is, if any, very slight, the experience of them having been small. It is encouraging to find, under the circumstances, that the Indian Government, both at home and abroad, is exercising a wise reticence, and is not promoting or adopting the inoculations

officially. Lord Onslow, in his reply, justly said that "sufficient time had not yet elapsed to estimate the degree of protection or how long it would continue." The new medical peer, Lord Lister, and his friends may try to force the hand of the Government, but we trust the latter will maintain the attitude they have assumed, and wait to see if the usual breakdown of the fine promises of the vivisectionists does not sooner or later follow.

OUR respected friend, the *Spectator*, appears sometimes to entrust the writing of its secondary articles to gentlemen of the Vivisection persuasion, one of whom has, with the utmost naïveté, let the cat out of the bag as regards the feelings of that party on the subject of the public control of hospitals. In the issue for February 13th, in an article on the *Mechanism of Philanthropy*, he says (speaking of the distress of the London Hospitals): "A grant of aid from the rates would place men of science under control of ignorant representative bodies in a way they would hardly be able to endure." Precisely so! The "men of science"—not to be confounded with mere physicians and surgeons devoted to the art of healing—the *men of science*—who are experimenting on the patients in the hospital wards, as a sequel to experimenting on animals in the laboratories of the adjacent medical schools—these gentlemen shrewdly apprehend that if they were once "under the control of a representative body," their "chamber-sport" would be peremptorily stopped. They would "hardly be able to endure" the regulations which would be swiftly enforced by such "ignorant" bodies to protect the miserable men and women on their beds of suffering from being "used otherwise than for treatment" according to the significant euphemism of one of the leaders of the profession.

SIR SPENCER WELLS, F.R.C.S., died at Cap d'Antibes, near Cannes, on the 31st of January. It is a curious coincidence that the same number of the *British Medical Journal* (February 6th) as contained his obituary and spoke of him as the "establisher of ovariectomy," also contained an account of the first ovariectomy, successfully done by Dr. Ephraim McDowell, of Danville, U.S.A., in 1809, nearly half-a-century before Wells thought of attributing the operation to experiments on animals.

THIS will show who was the pioneer in the operation referred to, yet nevertheless, such is the ignorance or the persistence in error of the lay press, that we find in *The Times'* obituary notice of Sir Spencer Wells, such absolute nonsense as the following:—

"He conferred incalculable benefits upon the weaker sex by showing the way to relieve suffering of the most distressing kind which had previously been practically regarded as beyond the reach of art. Others have followed in his steps and possibly bettered his instructions, but that does not in any degree detract from the honour due to a pioneer in a difficult path."

Sir Spencer Wells did not "show the way," and therefore was not a pioneer, and the fact of the *Times* making such a statement serves to show how much its conductors have to learn before they can make intelligent their present perverse support of vivisection.

DR. MARMADUKE SHIELD, assistant surgeon to St. George's Hospital, contributes to the *British Medical Journal* (January 23rd, p. 193) some remarks on a case

of tumour of the breast in a nurse treated by injections of toxins of erysipelas and the *bacillus prodigiosus* obtained from the British Institute of Preventive Medicine. The patient died, and Dr. Shield says, "it is right to allow that her life was undoubtedly shortened by the treatment." The injections seem to be of a very dangerous character.

Nor the least of the many objections to experiments on animals as a method of research is the fact that the prevalent craze for vivisection seriously retards discovery by other and harmless methods. We learn from the *British Medical Journal* (January 23rd, p. 194) that Dr. Hutchinson, late chemical assistant to the Professor of Physiology, University of Edinburgh, has succeeded by purely chemical means in isolating the active principle of the thyroid gland, and has achieved equally good results in the treatment of myxoedema as those which have followed the older method by using thyroid extracts. The chemical investigation has proved that the activity of the thyroid gland is due to a ferment which can be used in the form of a powder. All this research could have just as well been done before as after the cruel experiments of Horsley, and the benefits to medicine would have been as great though secured by harmless means.

DR. HERBERT LILLEY, assistant surgeon to the London Throat Hospital, in a paper communicated to the *British Medical Journal* (January 23rd) on operations in the region of the nose, says:—

"In these days, when enthusiasm runs high . . . I am sure I do right in adding a word of warning with regard to careless probing in the higher nasal regions. . . . I am correct in saying that it is a proceeding which bristles with danger both to neighbouring healthy structures and to life."

It is then admitted that operative "enthusiasm" leads to carelessness which endangers life. The rage for experiment, in other words, often kills hospital patients; this is what it comes to in plain English.

It appears that M. Paris, successor to M. Pasteur's chair at the Academy of Sciences, in pronouncing a eulogy on that worthy, stated that "microbes were known before Pasteur." This is, of course, true, yet it sounds to us as a discovery. We have frequently noticed that bacterio-maniacs in writing and speaking of their pet bacilli, assume the tone of having almost invented them—as if they had but just come into existence. The fact is patent that bacteria and bacilli must have existed from the beginning of time, and considering how long the microscope has been available for investigation, it is rather a discredit than a credit to science that they were not identified many years earlier.

A SHEPHERD in Warwickshire, bitten by a dog "supposed to be mad," has been sent to Paris and treated by Pasteur. "While engaged at his work he noticed a rabid dog run across the field and attack two collies." This was all the evidence there was of the madness of the dog, and yet the man—who attacked it with an iron bar and got bitten, which does not seem very strange—was sent to the Pasteur Institute, and will, of course, hereafter be reckoned as one of the successes of that establishment. No doubt—indeed it is admitted—there are many such ridiculous cases.

THE *New York Medical Journal* for January 2nd, 1897,

has a long article emanating from the Bureau of Animal Industry and Vivisection in the District of Columbia, on the Bill before the Senate of that district, entitled "A Bill for the further Prevention of Cruelty to Animals in the District of Columbia," on which the Senate Committee has decided to report favourably. The article calls attention to the restrictions of the British Government on the American cattle trade, and it complains that although there has been no pleuro-pneumonia in the United States for over four years, the British inspectors frequently condemn American cattle as being affected with that disease. The American inspectors hold that the pneumonia which the cattle suffer from on landing is not the infectious variety, but the ordinary pneumonia due to exposure on the voyage.

"How," it is argued, "is this to be settled without experiments on animals?" The only way, it is maintained, would be to expose healthy cattle to the animals declared to be affected with the contagious pleuro-pneumonia. But such an experiment would be calculated to give pain. As it would not be a surgical operation, nor an inoculation process, it would be prohibited by our Vivisection Acts, unless the animal were kept under chloroform for the three or four weeks during which it might feel pain. It is argued, therefore, that it would be unwise to pass the bill in question. The absurdity of the whole argument is manifest, and, as a fact, is merely a medical dodge to deceive the public. Who would expose healthy cattle to the risk of infection just to settle a question of this sort? Are we to understand that with all our boasted bacteriology, the discovery of the bacterium of infectious pneumonia, and all the rest of it, there is no other method of differentiating these diseases than the clumsy one of herding healthy with diseased cattle?

THE *Journal of Experimental Medicine* for November, 1896, contains a paper on "A Case of Human Glanders, and Experimental Glanders in the Guinea-pig," by Dr. J. H. Wright. A man contracted glanders while skinning a farcy horse. He began to suffer pains in his fingers, took to his bed, was ill with great thirst and fever, pustules broke out in his forehead and other parts of his body, they became confluent and ulcerated; septic poisoning developed, and he died thirty-one days after the accident. So much for the human patient and his sufferings.

Now for the vivisected guinea-pig and the inoculation experiments entailing what the Inspector terms so euphemistically, "no more pain than the prick of a needle." The animals were inoculated with blood-cultures of the bacilli derived from the original cultures from the pustules and abscesses of the human patient. The injections were made with a hypodermic syringe. The effects which were observed in the inoculated animals were emaciation, ulcers, abscesses, inflammation of the bowels, and other characteristic effects of experimental glanders. The guinea-pigs died in periods varying from a few hours to thirty-one days. What the man suffered that also was inflicted on the animals; and this is precisely what "Pasteur Institutes," alias "Bacteriological Institutes," alias "Institutes of Preventive Medicine" are maintained to inflict.

THE *Scalpel* has a note headed "Vivisection and Surgery," which reveals the fact that even medical

editors share the popular ignorance concerning the meaning of the word "Vivisection." Mr. J. R. Middleton recently told the Linnean Society that the Greek barbers of Smyrna heal wounds by the help of ants. The surgical ant (*atta cephalotes*) has a pair of strong mandibles and when taken up by a pair of forceps and held close to the cut edges of the wound the creature closes the mandibles and binds the wound with a strong grip. Mr. Middleton saw ten ants used to one wound. Complete union was effected, and the heads of the ants were then cut off and left in the wound. But this is not vivisection.

THE *Sun* is very severe with the bacteriologists. This is what it says about the microbe craze:—

"We are not a bit awed at the learned twaddle of these well-meaning bacteriologists, who would find microbes in heaven, and who would have issued a report condemning manna if they had been employed by Moses to report upon its collection and storage."

WE are pleased to see in the Right Rev. Abbot Tosti's "Life of Saint Benedict" just published, with a preface by Dr. Hedley, the Roman Catholic Bishop of Newport, some very thoughtful and beautiful remarks on the relations of man to the lower animals. Referring to the fact that the first hermits and fathers of the desert, though defenceless and solitary, never died from the violence of wild beasts, the author says:—

"They felt themselves bound by the bonds of paternal love with everything in God's universe. . . . The sin of the first man, as it separated him by rebellion from God, so did it separate from himself by rebellion the irrational animals, which were subject to God."

He argues that the hermits, by the pure lives they led, were permitted again to acquire their empire over the beasts, and these rendered mild by the virtues of the saints, returned to their former subjection. We do not anywhere learn that St. Benedict held the animals "as merely things" in his regard.

EXPERIMENTERS have observed that certain drugs produce diuretic effects on some animals and not on others. Dr. Corin, says *Health* (January 2nd, 1897, p. 38), after an extensive series of experiments has demonstrated that the effect of caffeine on the kidneys of rabbits and the absence of that influence on those of the dog is the result of what is called "vagus tonus," or the *tone* of the vagus nerve possessed by the dog and absent in the rabbit. Dr. Corin is now experimenting to see whether man has this nerve tone or not. This research proves one thing very clearly, whatever else may be in dispute, and that is that as animals differ physiologically amongst themselves so as to cause drugs to act on them in opposite ways, it is absurdly unscientific for us to expect to learn the action of drugs on a highly complex organism like that of man by observations made on inferior organisms.

HAENEL, says *Health* (January 2nd, 1897, p. 43), made wounds in forty-four guinea pigs, and injected them with a virulent fluid. His results are believed to prove that it is impossible to disinfect living tissues with carbolic acid or anything else. Mr. Lawson Tait found out all that long ago.

LABORATORY experiments to prove that cancer can be inoculated are still going on. Mayel, of Lyons, has inoculated white rats not only by grafting but by the

juice of cancer. Geissler has produced fatal cancer in a dog by grafting; the animal died after eight months of suffering.

A WELL known veterinary bacteriologist, famous for discovering glanders in every horse he examines, is declared by his professional brethren to be equal to discovering the microbe of the disease in an apple tree if it were brought under his notice.

OUR contemporary, the *Dublin Evening Mail*, the leading Irish Conservative organ, had for its leading article, on the 11th February, a very witty, satirical commentary on "Dr. Roux and the Plague." We wish we could transfer the whole column of banter to our own pages, for there is no treatment so fit for the mania of the hour for "microbes" of disease, as good humoured and keen *persiflage*. So absurd, however, are the statements and claims of Dr. Roux and the other investigators of bacilli that the English public, which has schooled itself to reading them gravely as the high revelations of science, might perhaps peruse the brilliant leader in the *Mail* under the impression that it was all seriously intended, down to the close, where the writer says that "in the darkness of the Middle Ages our ignorant forefathers dealt with the plague by the method of exorcism. But the Science of to-day has changed all this, and we put our trust now in microbes and modified serum, and the statistics of the *Pasteur Institute*." (Italics ours).

CAN it be that the *Lancet* is also among the Anti-vivisectionists? It would almost look like it from a leader in the issue of February 6th, in which we find our contemporary repeating our sentiments as if they were its own original ideas. The title of the article is "The Practical Element in Teaching and Examining," and here is an extract from it:—

"Scientific subjects are allowed to increase daily and to encroach more and more on the time which should be spent in the dissecting-room, the laboratories, and the wards and out-patient rooms of the hospital. The first year is now devoted to chemistry, physics, and biology, the examinations in these subjects are specially arranged to favour cramming and textbook knowledge, and the judgment of the examiners as to the proficiency of the students in these sciences is often erroneous because the tests of the practical work are wholly inadequate."

How often have we not pointed out that a medical man has no right to consider himself a scientist or to be considered one, much less to be educated to be one. His business is to be a *healer*, and to that end alone his education should tend. We are glad to find the *Lancet* coming round to our opinion:—

"Passing on to the next period of the student's career, every anatomical teacher who is familiar with the daily work of our profession deplors the decadence in practical anatomy which is now so marked. . . . The student is no longer to study anatomy in its application to the practice of medicine, surgery, and midwifery, but he is to be taught this eminently practical science 'from a morphological standpoint, and as a member of the great animal series.' His science is everything; his practical investigation for his after career is relegated to quite a subsidiary place. So in physiology the time that was formerly allotted to the elucidation of the functions of the human body, to the proper methods of preparing histological sections of the organs, and to the broad facts in the chemistry of the secretions, is now mainly occupied with minute details of physical and chemical experimental physiology, so that the student cannot see the forest because of the immense number

of the trees. Such a course, again, may be advantageous to a pure physiologist, but it is entirely outside the training necessary for a medical practitioner."

Exactly. And the consequence is, as a result of handing over medical training and examining to vivisectioning specialists, we have the medical world flooded with pro-vivisectioning monstrosities, instead of helpful medical men and women.

By a curious coincidence, the same number of the *Lancet* (February 6th) supplies an article—perhaps by way of an "awful example"—by C. S. Sherrington, M.A., M.D. Cantab., F.R.S., Holt Professor of Physiology, University College, Liverpool, entitled, "Catapleptoid Reflexes in the Monkey," containing an account of vivisectional experiments of the most pernicious and useless kind. How any young men can be otherwise than led astray from the narrow paths of healing when under the influence of a mind capable of such anti-healing deeds it is hard to conceive. "A phenomenon," says this learned teacher of young medicals, "came under my observation in the course of experiments on monkeys at the commencement of the present year, which seems sufficiently interesting to merit record here." The subjects of the experiments (but this is a matter of the merest detail, and in no way detracts from the "interestingness" of the observation) were monkeys, from whom the hemispheres of the brain had been removed, and who were consequently blind.

FROM the following extracts our readers will see that the unhappy monkeys were not the only blind creatures in the case. From anything which appears in the article, the experimenter was as completely blind to the fact that his "material" was sentient as if he had been recording observations on some new motor car —

"If the cerebral hemispheres be carefully removed—e.g. from a monkey—with avoidance of hæmorrhage and of fall of body temperature, and if sufficient time be allowed to elapse for subsidence in the animal of what may be called shock, movements can be evoked remarkably different from those I have ever seen elicitable as purely spinal or as cerebral reactions. If a finger of one of the monkey's hands be stimulated, for instance, by dipping it into a cup of hot water, there results an extensive reflex reaction involving movement of the whole upper limb. The wrist is extended, the elbow flexed, the shoulder protracted, the upper arm being drawn forward and somewhat across the chest. The movement occurs after a variable and usually prolonged period of latent excitation. . . . Analogous results are obtainable on the hind limb. Hot water applied to a toe evokes always, so far as I have seen, flexion of ankle and knee; usually of hip also. This movement is 'deliberately' executed, and always institutes a maintained posture. If the finger (or toe) of both right and left limb be placed together in the hot water there results symmetrical reflex movement of both the right and the left fore limbs (or hind limbs), leading to assumption of a fairly symmetrical posture by the right and left limbs respectively, the posture being similar to, but duplicate of, that evoked in the one limb only on excitation of that limb."

Some highly diverting variations were produced by pinching one or other of the animals' ears. Here is a touch of unconscious pathos in the picture—

"The animal in all my experiments has been completely blind, but a sharp conjunctival reflex exists."

Though the eyeballs were sightless they yet showed signs of feeling and responded to the stimuli (pin-pricks very likely) of the feeling-blind experimenter.

IN an article on "The Cough Mixture," in its issue

of January 9th, the *Chemist and Druggist* comments on the article by Calvert in the *Journal of Physiology* of August 21st last, and referred to in the *British Medical Journal* of November 21st, giving an account of experiments which the *Chemist and Druggist* summarizes as follows:—

"A window in the trachea of an animal (cat under chloroform, urethane, or morphine) being made, and the surface dried by blotting-paper, drugs were injected into a vein or subcutaneously, and the rate of formation of secretion observed, and compared with that before the administration of the drug. It was found that alkalis increase the secretion in spite of Rossbach's assertion to the contrary; that potassium iodide acts similarly, and emetine only markedly so. Saponin (senegin) in small doses does not increase secretion; in large doses it diminishes it. Cold and heat applied to the abdomen increase and diminish secretion respectively."

On this our contemporary comments as follows:—

"This is one of those nice researches which wicked antivivisectionists would put down, and we confess to some sympathy with them because the conclusion that senega does not excite the bronchial secretion is contrary to all clinical experience."

In the *Lancet* of January 23rd is an account of an "interesting paper" presented to the Royal Society by Dr. Page May, describing a series of investigations into the "segmental representations of movements in the lumbar region of the mammalian spinal cord." The mammals in question were dogs and monkeys, and the particular object of the research was to discover which segments of that particular part of the cord it was necessary to "stimulate" in order to produce certain movements of the tail and lower limbs—

"The method mainly followed was that by excitation of nerve roots and also of the spinal cord, and as a means of controlling the observations with this method mechanical stimulation (pinching, etc.) was sometimes employed in examining the nerve roots. The dog and the monkey were the animals chiefly experimented upon, and in the dog the excitable area of the cord surface was found to be the postero-external column."

Of course, in order to do this, the spinal cord must be exposed by removing part of the vertebræ, which make up the backbone in that region. How far it was possible to maintain anæsthesia without interfering with the "reactions" it is not for us to say, and we greatly question if the experimenter himself knows.

Here is a specimen of the proceedings:—

"When the cord was transversely divided above the lumbar enlargement the movements were more easily elicited. It was also found that the point, stimulation of which gave movement of the tail, was placed internal to the point for the hamstrings, this again internal to that for the hip, while most external of all was that by stimulation of which movement of the side of the trunk was elicited. Stimulation of the nerve roots gave very interesting results."

Among the conclusions arrived at is the following, which shows that dogs and monkeys do not entirely correspond:—

"Stimulation of anterior roots in the dog produces extension of the posterior roots flexion of the limb as a resultant movement. In the monkey there is not this apparent antagonism, because stimulation of anterior roots brings out a differentiation of flexion and extension, although stimulation of the posterior roots gives flexion alone."

Here is the *Lancet's* usual cry—it "wants some more"—and in another part:—

"The paper, as will be seen, forms a valuable contribution to the physiology and anatomy of the spinal cord, and we await

with interest the study of the results of similar methods applied to the investigation of the cervical and upper dorsal cord."

We may suggest to the *Lancet* that if it is really anxious to reform the teaching of medical youth, it will never accomplish its object until it has banished from its pages all records of the licensed cruelties which the said youths are now taught to look up to as laudable sacrifices to their great goddess Science.

THE OFFICIAL RETURNS.—QUESTIONS IN PARLIAMENT.

In the House of Commons, on Thursday, February 4th, Mr. MACNEILL asked the Secretary of State for the Home Department, why the annual Report of Experiments on Living Animals is published later and later every year; and, whether, having regard to the fact that the last Vivisection Report for the year 1895 was published on the 6th August, 1896, when Parliamentary intervention that Session was impossible, he will give an assurance that the Report for 1896 will be published in time for discussion on the Estimates?

The HOME SECRETARY said:—I explained in answer to a question of the hon. member last August why last year's return was issued so exceptionally late. Every effort will be made to issue the return in future at an early date.

Mr. MACNEILL also asked the Secretary of State for the Home Department what measures were taken in respect to two men licensed to perform experiments on living animals during the year 1895, under the provisions of the 39 and 40 Vic., c. 76, who are stated in the report of the inspector, G. V. Poore, Esq., M.D., to have been guilty of irregularities as vivisectionists; what were the irregularities brought by the inspector in these cases under the notice of the Secretary of State; were any proceedings under the provisions of The Cruelty to Animals Act, 1876, taken against these persons or either of them; and, were certificates granted to them by the Home Secretary revoked?

The HOME SECRETARY said:—The irregularities consisted, in the one case, in the licensee performing an operation on a cat without having the necessary certificate; in the other case, in the licensee performing two experiments necessitating a certificate which he had omitted to obtain. In the first case, the licence was revoked and not re-granted until after an interval of three months and a half, and steps were taken to prevent a recurrence of the irregularity. In the second case, the consideration of the application for a renewal of the license was deferred for a month. In neither case was it thought desirable to take further proceedings.

In the House of Commons, on Friday, February 5th, Mr. MACNEILL further asked the Secretary of State for the Home Department whether the two men stated in the report of the inspector to have been guilty of irregularities as licensed vivisectionists are now in possession of licences enabling them to perform experiments on the bodies of living animals without anæsthetics, and without being obliged to put the animals to death after the operation; what was the nature of the operation performed by one of these vivisectionists before he had obtained a licence; to what penalties did he expose himself by his conduct, and why were not proceedings instituted against him; why were the names of the two vivisectionists not published in the report; and will the Home Secretary now declare the names of these persons?

The HOME SECRETARY said:—Both the gentlemen referred to now hold licences, one of them with the addition of certificates which enable him to perform experiments without anæsthetics, the other with the addition of certificates which dispense with the obligation of killing the animal after the effect of the anæsthetic has passed off. As regards the second paragraph of the question, both gentlemen held licenses at the time of performing the experiments in question, but had omitted to obtain the certificates which were also necessary under the Act. The experiments in both cases were such as would have been allowed to be performed by properly qualified persons, and both gentlemen had previously the certificates which, in the cases in question, they had omitted to obtain. The penalties are those provided by the Act of 1876, namely

fine for a first offence, fine or imprisonment for subsequent offences. The irregularities were committed before I came to the Home Office, but I see no reason for dissenting from the opinion of my predecessor that in the particular circumstances the withholding of the licence for a time and the warning given were sufficient punishment. It was decided on the same grounds not to publish the names, and I am not prepared to do so now.

Obituary.

MRS. MASSINGBERD.

This lady, the founder and president of the Pioneer Club for ladies, an institution which includes in its ranks many anti-vivisectionists, of whom she was one of the most zealous, expired at Llandudno in the last week of January. Months before she had undergone a serious operation, from which she never recovered, and from the consequences of which she died. Her residence was at Gunby, Lincolnshire, where she was the owner of landed estate, much of the income from which had been for some years devoted to the promotion of various movements for the benefit of women. She was regarded with great respect and affection by her sister "Pioneers," among whom her demise created profound grief. For their benefit, and that of other London friends, there was a preliminary funeral service on the 3rd of February, at St. John's Church, Smith Square, Westminster. Before the service commenced, the beautiful floral tribute presented by the club was carried forward by twelve members, headed by the Viscountess Harberton, and laid down before the coffin. A cross of white arum lilies and white rosebuds was sent by the British Women's Temperance Association, and a wreath came from the National Central Society for Women's Suffrage. Other wreaths came from the Anti-Vivisection League, the Shakespeare Society, the United Kingdom Alliance, and the Humanitarian League. The service was read by Canon Wilberforce, who, in a brief address, spoke of the sympathy Mrs. Massingberd had always shown with the ever-widening forces of the time. She was earnest in her struggle against those inane disabilities which had been placed on her sex, and it was strange that a debate on the subject for which she cared so much was even then taking place in the House of Commons. The service closed with a prayer for the departed.

MRS. E. P. NICHOL (EDINBURGH).

The Scottish Anti-vivisection Society has lost a beloved and honoured lady, one of its earliest and staunchest friends, in Mrs. Nichol, of Huntly Lodge, the widow of the astronomer. For many years, while her health and sight lasted, she made her charming house, on the outskirts of Edinburgh, a social centre for Anti-vivisectionists in Scotland; and her sound good sense, her zeal and liberality were invaluable aids to the Society. Even to the end, in extreme old age (she was born January 5th, 1807), and when for years she had been stone blind, her interest in the cause remained unchanged, and she caused her amanuensis constantly to read to her the letters of friends and to transmit messages of sympathy and cheer to workers all over the country. It was a beautiful and noble old age; as became the daughter of Joseph Pease, of Darlington, "the Friend of India," as Clarkson called him.

The colleagues of Mrs. Nichol, whose demise occurred on the 3rd of February, were much affected by the news of her death, and at their meeting held in Edinburgh on Tuesday, February 9th, the Rev. J. Baird, the President of the Society, made feeling allusion to the sad event. The Committee of the Scottish Society have sent the following resolution to her bereaved relatives:—

"The Committee have received with deepest regret the announcement of the death of Mrs. Nichol. Her long

and faithful services to the Anti-Vivisection Cause leave behind a memory of devoted zeal and disinterested goodness. The Committee feel they have lost an invaluable friend and helper, and one round whom gathered public interests of many kinds. Spared to a great age, she ever evinced the liveliest interest in the progress of the movement against cruelty of every kind, and they thankfully put on record their deep sense of her helpful counsel, influence and labours."

MISS FULTON (MELROSE).

The Anti-Vivisection Cause in the borders of Scotland has suffered the loss of another warm friend by the death of Miss Fulton, which took place at the end of January, at her residence, West Hill, Melrose. Miss Fulton has been for a series of years, not only a subscriber to the Society, but, along with the late Mrs. Thomson, of the same place, a leader and defender of the movement. Wherever she went she used her influence on behalf of the Society's efforts, and bestowed much self-sacrifice and devotion to advance its objects.

MISS CRAIG (EDINBURGH).

The Scottish Society has to deplore the loss of another friend by the death of Miss Craig, of Carlton Street, Edinburgh, which took place in January. Miss Craig had joined in the work of the Society from the time of its formation, and while never prominent in the Committee, in a quiet way did much to advance the Cause and its interests.

NEW BOOKS, REPORTS, ETC. MIMETIC DISEASES.

We are glad to receive a copy of the very able paper on this subject by Dr. Matthew Woods, the celebrated physician of Philadelphia, reprinted as a pamphlet. Dr. Woods brings out very clearly how many cases registered as "Hydrophobia" must unquestionably be instances of the action of the mental laws, by which (just as the *idea* of food "makes the mouth water") the *thought* of certain maladies on excitable minds causes the spontaneous simulation of the disease, to the deception not only of the patient himself but of his doctor. "The junior student of medicine," Dr. Woods says, "frequently appropriates the disease under investigation by his class, so that during the college year the more susceptible really have half the disorders described in the curriculum."

"It is a familiar fact that at the close of many of the discourses delivered, say, from the Chair of the Practice of Medicine, the professor is privately consulted by students suffering from all the symptoms described; and this imitative peculiarity is not limited to such ailments as disease of the heart, consumption, Basedow's disease, gall-stone, cancer of the pancreas, or appendicitis, but some have been known to become hemiplegic—viz. incapable of motion and sensation in the right or left half of the body, as the case may be—during a realistic lecture on cerebral apoplexy. Others are seized with violent 'pain in the knee' during an elucidation of the symptoms and pathology of Potts' disease, while there are reports of students acquiring all the subjective symptoms of dislocation or fracture, because of the impression made upon their minds by the lecturer while discussing these surgical states."

After referring to the Dancing Mania of the Middle Ages, Tarantism, etc., Dr. Woods goes on to say:—

"In the light of the above illustrations of the power of the mind over the body—for these were not ill in the ordinary sense, nor were they malingerers who assumed sickness for gain—it is not strange that many people among us, having been previously bitten by dogs, unconsciously simulate what are to them symptoms of hydrophobia. From childhood familiar with stories of horrible death from the bite of rabid animals, it would be singular indeed, *expectant attention* being thus created, if at least a few, under the influence of ideo-motor action rather than rabies, did not produce *replicas* of that 'series of symptoms' falsely called hydrophobia, and so lose control of their reason as to re-enact for us the familiar antics of 'getting down on all fours,' 'larking like dogs,' 'foaming at the bill' (as Goldsmith says of a hydrophobic goose, while writing derisively of this curious possession), 'going into convulsions at the sight of water,' and finally making a tragical *denouement* between the traditional feather beds, or, worse—being sent for treatment to some Institute of Pasteur."

HOSPITAL PRACTICES AND THE JUBILEE FUND.

The following letter, sent round to the press, was published in several London and provincial newspapers:—

SIR,—The project of the Prince of Wales for the celebration of the 60th year of the Queen's reign seems to have been drawn up rather hastily, without due consideration of all the conditions. It labours under one serious objection, which it is to be hoped may be perceived and removed ere the plan be finally adopted, for if it be retained a considerable portion of Her Majesty's most loyal subjects will be debarred from joining in the proposed subscription.

It is true that the nation is united—as probably no equally great one has ever been since the world began—in affection and respect for the sovereign and desire to do her honour. There is also amongst us practical unanimity as to the duty of making humane provision for the wants of the sick poor, but no similar agreement is to be found as regards either the present management of hospitals or the education of medical students. As regards the first, a large section of the public gravely apprehends that the patients in our hospitals are subjected not infrequently to baneful experimentation for purposes of research quite apart from the cure of their maladies. As regards the second, another, and perhaps still larger part of the nation (of whom upwards of 180,000 in London alone have just signed a memorial against the Institute of Preventive Medicine), views the practice of vivisection, for which nearly all the medical schools are licensed, with abhorrence, as both cruel to the brutes and demoralizing to the human participants, and as constituting, in Lord Shaftesbury's well-known words, an abominable sin.

Now, sir, neither the people who believe that the patients in hospitals are often used for unjustifiable experiment, nor those who consider that the common instruction in the medical schools involves an "abominable sin," can give their money, even with the warmest desire to honour the Queen, to the hospitals of which they have such suspicions; or aid (as the Prince is careful to point out) the medical schools wherein the "advancement of medical science" proceeds by the road of vivisection. We, therefore, venture respectfully to urge that either some alternative loyal fund be opened for a model hospital under public control; or else that a public announcement be vouchsafed of the name of any hospitals to which direct subscriptions may be sent as part of the Jubilee Fund; hospitals where the medical schools (if any) attached to them have taken out no license for vivisection, and on the staff of which no name of a licensed vivisection appears.—Yours, etc.

ERNEST BELL,

Chairman of Committee Victoria Street and International Anti-Vivisection Society.

20, Victoria Street, London, S.W., February 11th, 1897.

CRUEL WASTEFUL REPETITIONS IN VIVISECTION.

Our outspoken and courageous contemporary *To-day*, had the following in its issue for January 30th:—

An article on "The Human Voice," in the current number of *Musical Opinion*, affords an interesting sidelight upon the subject of vivisection. "Now, the subhyoidian pharynxotomy performed on dogs, cats, and other animals never gave satisfactory results." (What subhyoidian pharynxotomy may be hardly needs explaining in this connection.) "Although you are thus enabled to see through the incised wound the action of the vocal cords of a dog when barking, you feel very much deceived at hearing but a soft and deep tone—a kind of groaning or moaning—instead of sonorous, sharp, or acute screams, such as animals generally utter when wanting to cry out with pain." The operation does not appear to have been productive of any more benefit than have other cruel operations performed upon animals, but the essence of the argument lies in what follows.

"The consequence is that, though young anatomists may still be curious to repeat these experiments, it is a fact demonstrated hundreds of times (under varying experimental circumstances), that it is of no use comparing the action of the human vocal cords," etc., etc. If experiments of this nature were confined to operations legitimately performed for the honest purpose of acquiring scientific knowledge, some of us anti-vivisectionists might feel inclined to moderate our

opposition. But the hideous fact remains that in ninety-nine cases out of a hundred vivisection is performed for no other purpose than that of affording amusement and interest to the operator or his audience.

Experiments reeking with cruelty are performed a hundred times to demonstrate a useless piece of knowledge that is the common property of science. Experiments involving hideous torture are performed by students for the mere pleasure of performing. They know all that can be known; there is nothing to learn. They will inflict a long agony upon a living animal, as a child will drop sixpences into a tumblerful of water to see how many the glass will hold before the water spills. Medical readers have taken exception to my making use of such phrases as "grinning students," and will argue as though all experiments were entered upon with due sense of the awful responsibility to God and man. In ninety cases out of a hundred they are performed for pure amusement, and it is idle to deny that the sight of the suffering adds to the enjoyment.

THE BUISSON BATH IN INDIA.

The following important and interesting correspondence has been forwarded to us for publication. Its great interest, as will be observed, lies in the fact, which it illustrates, that the Government of India has a mind of its own in regard to remedies for hydrophobia, and is not bound by medical prejudices:—

The High Elms, Nutfield, Surrey, Nov. 16th, 1896.

MY LORD,—May I venture to draw your attention to the enclosed article on the Buisson treatment for hydrophobia and to the accompanying map which represents the work of the past ten years of my life, and the outlay on the part of others—single-hearted philanthropists—of considerable sums of money. You will see, my lord, from this map and article that the Buisson cure for hydrophobia—a cure that does not traverse Hindoo religious scruples—is offered at no fewer than twenty-six stations in the Empire, thus obviating even an apparent necessity for the treatment of the disease by methods abhorrent to the Hindoo mind.

At each of these stations literature explaining Dr. Buisson's method and contrasting it with Pasteurian animal inoculation is to be had free of charge, and all treatment, no matter whether of long or short duration, is given gratuitously.

With many apologies, my Lord, for thus troubling you,

I am, my Lord,

Yours obediently,

FRED. E. PIRKIS, Fleet Paymaster, Royal Navy.

His Excellency the Right Hon. the Earl of Elgin
and Kincardine, Viceroy and Governor-General of India.

[Copy].

From J. P. Hewett, Esq., C.I.E., Secretary to the Government of India,

To F. E. Pirkis, Esq., Fleet Paymaster, Royal Navy, The High Elms, Nutfield, Surrey.

Calcutta, 7th January, 1897.

Home Department (Medical).

SIR,—I am directed to acknowledge the receipt of your letter dated the 19th November, 1896, addressed to His Excellency the Viceroy and Governor-General of India, with which you forward certain papers regarding the Buisson method of treating cases of hydrophobia.

2. In reply I am to suggest for the consideration of the Society which supports the Buisson method of treatment that it would be advisable to locate curative baths at principal hospitals in some important towns. At present the baths are placed in institutions which are unlikely to be as well known to the public as are the Government Dispensaries for treatment. If facilities for the Buisson treatment were afforded at some of these Dispensaries they would be more largely used than at present, whilst at the same time reliable information would be obtainable as to the results of the treatment. I am to say that the Government of India are willing to afford facilities for the adoption of this course upon hearing from you that the Society favours it.

I have the honour to be, Sir,

Your most obedient servant,

(Signed) J. P. HEWETT.

Secretary to the Government of India.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, MARCH 1st, 1897.

LORD LISTER ON THE ZIG-ZAG PATH.

"SCIENCE," it has been well said, "is teaching man to know and reverence truth, and to believe that only so far as he knows and loves it, can he live worthily on earth and vindicate the dignity of his spirit." Science dependent upon falsehood and misrepresentation is unthinkable. Religion has unhappily often allied itself with ignoble practice. In the dark ages it was not easy perhaps to distinguish between worthy and unworthy means of serving God, but in these days of universal enlightenment Truth can seek no alliance with what is false; she is strong enough to stand alone. A deaf and dumb boy having been asked, "What is truth?" replied by thrusting his finger forward in a straight line. He was then asked, "What is falsehood?" when he made a zig-zag with his finger. We are sorry to see our new and only medical lord wandering on the zig-zag road. Lord LISTER, notwithstanding his elevation to patrician rank, has proved that the chrysalis in his case is not wholly merged in the butterfly. The vivisector can no more change his mental attitude than the leopard his spots; you may crown him with pearls and robe him in ermine; *noblesse* does not *oblige*, for the good reason that in the vivisection it does not exist. The practice of vivisection cannot in this country at least be maintained by fair and honourable means. Cruelty takes unto itself falsehood, and falsehood keeps the house. Lord LISTER delivered an address on the value of Pathological Research on January 20th, in connection with the opening of the new physiological and pathological laboratories in Queen's College, Belfast, during the celebration of the Jubilee of the College. The address is published in the *British Medical Journal* of February 6th. It opens with some words of praise to the science of bacteriology as an aid to diagnosis, and we are told that for the future any medical man in the North of Ireland will only have to send in a suitable tube, a portion of the false membrane from the throat of a supposed diphtheria patient, to the Belfast laboratory, and in a short time he will be informed whether the case is one of true diphtheria or not. All we can say is, that the doctor who should delay his active treatment of a case he believed to be

one of diphtheria while a bacteriological investigation was being made of the scrapings of his patient's throat by scientists at a distance, would be guilty of jeopardising his patient's life. Treatment in such a case to be effectual must be prompt; an hour's delay might make all the difference between a cure and a catastrophe.

Nor can any bacteriological examination definitely settle the question whether the case be one of true diphtheria or not, for the presence or absence of the Löffler bacillus, which is all that such an investigation could decide, is not sufficient to settle the matter. The bacillus in question has been found in the throats of persons suffering from no disease at all, and has been absent from other cases undoubtedly diphtheritic. The study of practical bacteriology is urged upon the student to make him sharp in his observation, and dexterous in manipulation. "When he gets into practice," says Lord LISTER, "he will perhaps forget that the microbes exist, but he will know them as acquaintances." This does not strike us as saying much for bacteriology in actual medical work. In an address of this sort we naturally expect the customary allusion to our anti-Pasteurian crusade, and we are not disappointed. We are people of exaggerated views. We eat mutton chops and pheasants, "yet consider it monstrous to introduce under the skin of a guinea-pig a little inoculation of some microbe to ascertain its action." Killing for food is one thing, the prolonged horrors of the dog-hell of the Pasteur Institute quite another. Lord LISTER speaks euphemistically of "introducing a little inoculation," as though this were all we protest against. If he has seen PASTEUR's iron cage of mad dogs, and includes under the term "a little inoculation," such torments as that involves, we say he is not supporting worthily the dignity which HER MAJESTY has conferred upon him. "Motive," says his lordship, "is everything." The surgeon cuts a man's throat to save his life, a father chastises his son for the sake of the good of his morals. "And so it is with the necessary experiments upon lower animals." No, no, we protest *so it is not*. The animals are tortured not for their own assured benefit, but for the problematical good of another race of beings. It is obvious to the least logical intellects that there is no comparison between these cases. Then we are informed that of all professions, that of medicine is the most humane, and of all humane men PASTEUR had the tenderest heart. He could not bring himself at first to trephine a dog's skull for the purpose of introducing some of the poison of rabies into the brain. One of his assistants did the operation during the chief's temporary absence. PASTEUR was in great distress about it—not all at once does a man harden his heart. "Oh!" said he, "the poor creature! His brain has been touched. I am afraid he will be affected with paralysis." The dog frisked about him, "and PASTEUR was exceedingly pleased, and though he did not like dogs he lavished his affection upon that particular animal and petted it." We have seen with our own eyes the dogs upon

whom PASTEUR "lavished his affection" when he had silenced the scruples of his first rabies case. They did not trouble him long.

Lord LISTER, in his zig-zagging way, wishes us to understand that the pain inflicted by the operation of trephining is exceedingly slight. He declares that it is always done under chloroform, which, so far as the Pasteur Institute is concerned, we take leave to doubt. Here again is the *suppressio veri* and the *suggestio falsi*. The operation of trephining the dog's skull is the least part of the torment, the inoculation of its brain with the poison of rabies is the cruelty which makes us forget the pain of the initial operation. Lord LISTER's attempt to confuse the issue is unworthy of him as a teacher of his brethren and a recipient of the Queen's honours. We are next treated to some preposterous statistics about anti-toxin, and how its use has reduced the mortality of diphtheria to 5 per cent! Where, oh where do these things happen? Not in London, where from fifty to seventy deaths per week have lately been registered from this dread malady, which his lordship would have us believe is now little more dangerous than chilblains. M. YERSIN's inoculations for the Bombay plague afforded Lord LISTER another opportunity of exalting the work of the Pasteur Institute. The serum treatment was to be in operation on February 1st, and the plague was to be stayed. As yet it is merely an experiment—"Small though the number of cases is in which the serum has been tried, they carry conviction to my own mind," says the lecturer. These experimenters and medical scientists are always so easily convinced when mounted on their own hobby that we prefer to await results in the more practical shape of the mortality tables before expressing any opinion on the latest battle with a microbe; it is not with Lord LISTER's expectations we are concerned, but with his very serious and unworthy deviations from the straight path in argument which such a personage should pursue.

IMPORTANT EVENTS FOR OUR CAUSE.

THE past month has been marked by two remarkable events, fraught with the deepest interest for our Cause. The first was the issue by the PRINCE OF WALES through the columns of the Press in general, of an appeal to the public to celebrate HER MAJESTY'S "Diamond Jubilee," by subscribing and pledging them to continue to subscribe yearly to a fund for the support of the London Hospitals. Anti-vivisectionists, like the bulk of other people, are loyal to the throne and Royal Family. As a rule, we should say they are charitable beyond the measure of the bulk of other people. It is the very charity of their hearts which leads them to take so deep an interest in the fate of the abused and tortured victims of the laboratories. Nothing, we believe, would consequently give them more pleasure than to be able to contribute, through the media of hospitals, for the relief of suffering men and women. They are, however, more than suspicious of what goes on in regard to patients in hospitals. Revelations have

been made, ere now, by the authors of them, of experiments which, besides being entirely unjustifiable, were absolutely revolting. On that ground, therefore, Anti-vivisectionists, to the great pain and disappointment of many of them, are compelled to refrain from giving in aid of hospitals. But beyond this, there is a cause of serious disappointment, not to use a stronger word, in regard to the PRINCE'S appeal. Acting, no doubt, on the advice of those whom he considered reliable guides, His ROYAL HIGHNESS inserted in his appeal the following paragraph:—

"We must recall the fact that, apart from the purely philanthropic work carried on in the relief of our sick poor, we look to the voluntary hospitals for the means of medical education and the advancement of medical science. Our hope is that by the aid of this Commemoration Fund we may be enabled to secure for these necessary institutions sufficient and permanent support."

This is a position to assume on the part of hospitals and medical science which will repel hundreds if not thousands who would otherwise have been ready and cheerful givers. We fear it is too late to remedy the serious mistake which has undoubtedly been made, but nevertheless, most strenuous representations have been made in various quarters with the view of even now deterring, if possible, the promoters of the Subscription and the advisers of the PRINCE OF WALES from persisting in the regrettable intention which they have avowed.

Another event of high importance has been the completion and presentation of the enormous memorial from London to the HOME SECRETARY against the registration of the British Institute at Chelsea for experiments on living animals. We said last month that the number of those who had signed the memorial exceeded 100,000. In the end—and after the elimination of many hundreds of signatures which did not comply with the regulations—the total reached was the great one of 183,706. This result represented not only an enormous amount of zeal and self-denying labour on the part of those many good friends who assisted to obtain it, but a keen and widespread public appreciation of the merits of the question at issue, and a determination to help to the utmost in preventing the opening of another scientific torture house in the metropolis, where there are but too many of them already authorized. It has been affirmed that the memorial under notice was the largest that has been sent up from London since the time of the Chartist agitation. The task of getting it up was undertaken by a number of ladies and gentlemen, members of a variety of societies of a humane character, calling themselves the "Protest Committee."

Many names of importance were appended to the memorial, and amongst others the following:—The Duke and Duchess of Somerset; Lord and Lady Monkswell; Lord Coleridge, Q.C.; Lady Coleridge; Sir Henry Hawkins; Sir Arthur and Lady Arnold; Mr. Reader Harris, Q.C.; Bishop of Southwell; Bishop Barry; Canon Basil Wilberforce; Right Hon. Charles H. Hemphill; Right Hon. Sir Edward Thornton, G.C.B.,

P.C.; Lord Hatherton, C.M.G.; Earl Dartrey, K.P.; the Earl of Ilchester; Viscountess Wolseley; Viscount Sidmouth; Lord and Lady Muncaster; Lord Robartes, P.C.; Lady Mary Cross; Lady Helen Stewart; Lady Fanny Fitzwygram; the Hon. Eric Barrington, C.B.; the Countess of Camperdown; Lady Abinger; General Sir Arnold B. Kemball, K.C.B.; Sir Henry Irving; Mrs. Keeley; Mr. Hayden-Coffin; Mr. Sant, R.A.; Mr. Faed, R.A.; Mr. Bret Harte; Mr. Clifford Harrison; Miss Marie Corelli; Mr. Jerome K. Jerome; the Rev. H. M. Webb-Peploe; the Rev. H. E. G. Bevan; the Rev. B. M. Kitson; the Rev. H. B. Haweis; the Rev. Dr. Hiles Hitchins; Rev. Dr. Joseph Parker; the Rev. Dr. Newman Hall; Lord Henry Bentinck, M.P.; Colonel Lockwood, M.P.; Hon. Philip Stanhope, M.P.; Mr. Swifte Macneil, M.P.; Mr. Justin McCarthy, M.P.; Mr. Geo. W. E. Russell; Mr. Channing, M.P.; Mr. Samuel Smith, M.P.; Mr. John Burns, M.P.; Mr. Bernard Shaw; Surgeon-General Thornton, C.B.; Surgeon-General Gordon, C.B.; Surgeon-General Reade, C.B.; and many other Peers, Members of Parliament, Guardians, Vestrymen, London County Councillors, Clergymen, Doctors, and influential people of all ranks.

It now remains to be seen whether the HOME SECRETARY will not, after such a powerful representation, grant the prayer of the memorialists.

LECTURES AND MEETINGS.

LECTURE AT HULL.

On Monday afternoon, Jan. 25th, the *Eastern Morning News* reports, Miss Garland gave an instructive and interesting lecture on "Anti-Vivisection" to the members of the British Women's Temperance Association, at the Temperance Institute, Hull. The lecturer made it her duty to prove, on the authority of physicians, surgeons, and professors, that the practice is misleading, unnecessary, and morally wrong, and that it is followed, therefore, not for humanity's sake, but simply for the pursuit of knowledge for its own sake, and that with immense cruelty, since more than half the applications made for licenses are made for its use without anesthetics. A resolution was passed asking the Home Secretary to cease to grant vivisection licenses.

PROTEST MEETING AT ISLINGTON.

A public meeting in protest against the licensing of the British Institute of Preventive Medicine (so called), known as the Pasteur Institute for experiments on living animals, was held on Monday evening, Jan. 25th, at the Primitive Methodist Church School-room, Caledonian-road, Islington, London. Mrs. Thomas Lough presided, and amongst those present were Mrs. Charles Mallet, Rev. L. S. Lewis, Mrs. Richardson (Islington Vestry), Miss A. L. Woodward, Miss Varley, P.L.G., Miss Hill, P.L.G., Miss Lizzie Farmer, P.L.G., Miss Jessie Clark, P.L.G., Mrs. Frederick Ward, Mrs. Joseph Renew, Mrs. Borman, Mrs. Miller, and Miss Mills.

Mrs. LOUGH said the subject which had called them together was an exceedingly painful one, and one that they hesitated somewhat at investigating. But if they wanted to put a stop to the evils of vivisection they could not be spared their duty of investigation. (Hear, hear.) People knew very little about vivisection, and what knowledge they possessed they obtained from their doctor. The majority of persons had a blind faith in doctors, and believed all they told them no matter how sceptical they might be on other things. It was time, however, that Englishmen and Englishwomen looked into the

matter and formed an independent opinion, and boldly stated that experimentation upon animals must stop. (Hear, hear.)

Mrs. CHARLES MALLET said they had met to protest against that terrible building in the course of erection on the Chelsea embankment, which, if licensed, would be the scene of horrors as bad as those of the Pasteur Institute in Paris. It was said by Lord Beaconsfield that English people were governed by phrases, and never was a wiser or truer thing uttered. They heard a catchy phrase upon a certain subject of which they knew but little, a phrase which was easily remembered, which quieted their consciences, and which gave the impression that they knew all about the subject. There was not a matter that was more governed by phrases than the question of vivisection. They accepted the phrases as truth, and did not realise their responsibility, did not recognise their brotherhood and sisterhood, their humanity as one great family which was affected by anything that touched any part of it. (Hear, hear.) They did not trouble to look into the question of vivisection, but accepted blindly the statement that great discoveries had been made by experiments upon animals, that the pain inflicted was nothing more than the prick of a pin. People believed those statements, but investigation proved them to be falsehoods and not truths. The great bulk of the medical profession did not practise vivisection; it was confined to a small body of physiologists, and it was quite untrue to say that great discoveries had been made through the practice.

The Rev. L. S. LEWIS and Mrs. RICHARDSON also addressed the meeting, and a resolution protesting against the licensing of the British Institute of Preventive Medicine was unanimously passed.

THE PASTEUR INSTITUTE AT CHELSEA.

PROTEST MEETING AT FULHAM.

On Tuesday evening, January 26th, a public meeting was held at the Town Hall, Walham Green, to protest against the licensing of the Pasteur Institute at Chelsea. Mr. T. H. Holding presided, the speakers including the Rev. Lionel Lewis, Mr. R. S. Wood, and Mr. Arthur Westcott.

The CHAIRMAN, in opening the meeting, said that the subject of vivisection had been discussed in some quarters, and a wrong impression created concerning it. When he was first spoken to about taking the chair, he knew very little about vivisection and its uses. He had, however, studied the matter, with the result that he was now a strong anti-vivisectionist. (Applause.) They were told that vivisection practised upon dumb animals was the means of moderating to a great extent the pain and suffering which human beings would have to undergo, but he did not believe it. The question of vivisection had not come before the working men of England in a very prominent manner, but he was sure that once they were acquainted with the facts concerning the practice they would make their voices felt in no uncertain manner. Let them remember that this sort of thing was done in some parts of that metropolis under license from Her Majesty's Government, and with the consent and co-operation of the Royal College of Surgeons. He hoped they would be perfectly unanimous with regard to their opposition to the licensing of this new building on the Chelsea Embankment for the purposes of vivisection under the system adopted by Pasteur at his institute at Paris. (Hear, hear.) He trusted that the resolution which would be moved would be carried. (Applause.)

MR. ARTHUR WESTCOTT then delivered his lecture upon the Pasteur Institute, in which he described some of the scenes he had witnessed while on a visit there.

MR. R. S. WOOD moved a resolution to the effect that the meeting urged upon the Home Secretary its protest against the proposed licensing of the Pasteur Institute at Chelsea and elsewhere, and that copies of the same be sent to Sir M. W. Ridley, the Home Secretary, and to Mr. W. Hayes Fisher, M.P. for Fulham. (Applause.)

This was seconded by the Rev. LIONEL LEWIS, and supported by Mr. G. HAGOPIAN, who spoke against the practice of vivisection.

Mrs. DREW, a member of the Fulham Board of Guardians, who was amongst the audience, said they had heard a great deal of sentiment that evening, but she would like to hear the

opinion of a medical man on the subject if there was one present.

The CHAIRMAN said he would willingly give five minutes to anyone who would like to come and speak in support of vivisection. (Hear, hear.)

No one having accepted the invitation, the Rev. LIONEL LEWIS quoted, in reply to Mrs. Drew, the words of Mr. Lawson Tait, who says:—"Like every member of my profession, I was brought up in the belief that by vivisection had been obtained almost every important fact in physiology, and that many of our most valued means of saving life and diminishing suffering had resulted from experiments on the lower animals. I know that nothing of the sort is true concerning the art of surgery, and not only do I not believe that vivisection has helped the surgeon one bit, but I know that it has often led him astray."

The resolution having been carried unanimously amid applause, the meeting concluded with a vote of thanks to the Chairman.

ENTHUSIASTIC MEETING AT ST. ALBANS.

The *St. Albans Times* reports that under the auspices of the St. Albans Mutual Improvement Society, a public meeting was held in the Congregational Schoolroom on Tuesday evening, February 2nd, on the subject of "Vivisection; why we should oppose it!" There was a good attendance. The chair was occupied by the Rev. H. W. Taylor, in the enforced absence of the Rev. W. Carson. He was supported on the platform by the Rev. T. Perkins, M.A., F.R.A.S. (rector of Turnworth, Blandford, Dorset), and Dr. Edward Berdoe, M.R.C.S. Eng., M.R.C.P. Edin., of London.

The CHAIRMAN said he was sure all present would regret the absence of the Rev. W. Carson, through ill-health. With regard to the subject before them, he had come to a distinct conclusion that vivisection was an abomination in civilization—an abomination in a Christian age—(applause). As soon as public opinion had been stirred up, the vivisectionists would need to be curbed and controlled in the experiments which they desired to make upon the dumb animals. Vivisection should be opposed because of its moral effects upon the nature of the viviselector or operator. Cruelty to mankind rendered a cruel man callous; and the scientific man who was perpetually engaged in causing animals suffering was rendered gradually, whether he would or not, callous to the sufferings of animals. Another great argument against vivisection was the grave possibility of such surgical experiments being extended to the human race. They had had instances given to them of how, introduced into some of our hospitals, it was possible in England he feared, but certainly upon the continent, to experiment upon the suffering bodies of the poor and unfortunate in the professed interests of science. He was very jealous indeed of any such danger to which his poorer brethren were subjected; and so soon as Englishmen and Englishwomen realised the possibility of extending this principle to human beings, so soon he believed would opposition arise. He had always desired and prayed that in any controversy he should be allowed to take the side of the oppressed and the weakest—(applause)—those who were defenceless and entirely unprotected—and if he was to carry out that canon in this matter, he was sure that a very eloquent plea was raised on behalf of the dumb animals—(applause). They were entirely defenceless and unprotected, and on that account, not merely as a Christian man, but as one with humanitarian sentiment, he was concerned to exert his influence upon the side of mercy and tenderness—(applause).

In the course of an excellent speech, Dr. BERDOE said he opposed the practice of vivisection, because it was founded on cruelty and maintained by falsehoods. It falsely pretended that the healing art could only be advanced by experiments upon animals, which, it was asserted, were not cruel, because necessary to science, and always performed under the influence of anæsthetics, when calculated to give pain. On the Continent, the vivisectors were at least honest; for they declared that practical utilization was not the object of their research, but the advancement of knowledge. British experimenters were emphatic in their protests that all the cruelty took place

in foreign laboratories, and that here under the restrictions of the Act of Parliament no torments could be inflicted. By a number of examples taken from medical and scientific journals Dr. Berdoe proved that it was possible to perform in England the most prolonged and severe experiments without the use of any true anæsthetic: but with the aid of curare alone, which rendered the animal motionless as a corpse while virtually intensifying its sufferings. If the tortures of the physiological laboratories could be justified by the plea of utility, the lecturer agreed that even the horrors of the Spanish Inquisition could be justified on similar grounds. As for the assertion that anæsthetics were always used when the experiment was calculated to give pain, proof was offered that in a great number of cases the anæsthetics would interfere with the results of the research and would consequently be inadmissible. In the large class of inoculation experiments, where the disease with which the animal was impregnated took weeks or months to kill, chloroform was obviously out of the question. The lecturer read a number of extracts from scientific journals, detailing in the words of the experimenters themselves, the operations on living, sentient, conscious animals which involved their disembowelment and which lasted as long as five hours. As for the results of this mode of research it was denied that they were in any degree commensurate with the suffering involved. A whole quire of myths and legends had been circulated to show that medicine had advanced only by the road of vivisection; but in proof that this was an utterly false claim it was pointed out that animals were not affected by drugs as human beings were, and that almost all poisons which were fatal to man could be taken by some animals with impunity. The fairy tales told about Harvey and the circulation of the blood, brain surgery, the discovery of abdominal operations, Pasteur's nostrum for hydrophobia, were explained, and the lecturer concluded by declaring that vivisection was an unscientific mode of aiding the study of medicine, which he believed could only be learned at the bedside and post-mortem room. (Applause.)

The Rev. T. PERKINS, in the course of an interesting speech, said they were sometimes informed that vivisection was a subject that could only be discussed by experts, and that the general public could not understand or form any opinion whatever about it. This he entirely denied, and quoted the example of a jury empanelled to decide a case. There it was not necessary for their jurymen to be experts, but simply men of practical commonsense, yet they were expected to record a verdict. They (his hearers) were quite capable, after hearing both sides of the question, of forming their own opinion as to whether vivisection was useful or not. They could certainly form an estimate of the moral question involved. He (the speaker) opposed it as a non-medical man, on the grounds that it was useless and immoral—(hear, hear). They were not justified in doing evil that good might come—(applause). To torture an animal was cruelty, notwithstanding the possibility or even the certainty of a good result. He thought the uselessness of vivisection was such as they might expect from the way in which it was carried out. The end did not justify the means. If they increased their knowledge of physiology by torture they could not have any great satisfaction in the increase so obtained. The anti-vivisectionists, said Mr. Perkins, were frequently spoken of as sentimental faddists. In reply to this he said it was a very easy thing to call people hard names, but there was no argument in that.

A discussion followed, Mr. T. A. WILLIAMS making an admirable address, and the meeting terminated with cordial votes of thanks to the lecturers and chairman.

COLONEL COULSON AT LEEDS.

On Wednesday evening, February 3rd, a meeting adverse to vivisection was held in St. James's Hall, New York Street, Leeds, and was addressed by Colonel Coulson, of Fourstones, near Newcastle-on-Tyne. The COLONEL, reports the *Yorkshire Post*, spoke from the humanitarian side of the question, and made a vigorous and manly appeal in favour of mercy to the brute creation. Asked the other day what was his aim in life, he replied it was to get through this mysterious existence with as little pain as possible to others and himself. He considered that the bulk of men were naturally cruel; this must be so, or

there would not be the delight there now was in killing, fox-hunting, and other so-called "sports." Cruelty lurked in the heart of most people, and he believed that a master of foxhounds was held in higher estimation in the public mind than a bishop. But to be cruel and indifferent to suffering was selfish and cowardly, inasmuch as suffering assumed quite another aspect when turned on ourselves. He did not deny that some scientific facts had been discovered by vivisection, but the question arose, Was the game worth the candle? Had anything been discovered by vivisection which might not equally well have been discovered by other means? A London surgeon, himself a vivisector, had assured him that vivisection was most abominably and disgracefully overdone. Professional rivalry was at the root of the question, for if this feeling did not exist the practice would not be defended or sustained. The people who opposed vivisection were trying amid many perplexities to believe in a God of pity who saw even a sparrow fall, but if we were compelled to admit the necessity of the awful sufferings perpetrated on dumb animals in the name of science, then good-bye to a merciful Being altogether, and we might as well confess that the world was given over to the devil. His remedy was the cultivation of the qualities of mercy and tenderness, and the sentiment of pity towards dumb animals, and the inculcation of a higher and nobler form of manliness. (Applause.)

An interesting discussion followed, in which Mr. CROSS-FIELD, a young physiologist, took part, defending the practice of vivisection on scientific grounds, and the meeting closed with a hearty vote of thanks to the gallant Colonel.

NEW MALDEN.

On Wednesday, Feb. 3rd, a meeting was held at the residence of Mr. and Mrs. Henry Taylor, in Cambridge Road, New Malden, Surrey, to protest against vivisection. The Rev. W. A. Challacombe presided, supported by the Revs. G. Manington and S. H. Moore, Mr. Arthur Westcott, and Mr. R. Somerville Wood.

Mr. WESTCOTT gave an account of the cruelties perpetrated on living animals in some laboratories, and showed that from a scientific point of view the practice was totally unjustifiable, the results attained being conflicting and valueless. He urged all present to use their influence in putting an end to the practice.

Mr. WOOD spoke on the moral aspect of vivisection, pointing out that it was entirely against the spirit and teaching of Christ, and that it was incumbent upon all who called themselves Christians to assist in the crusade against it.

The Rev. S. H. MOORE also spoke, and Mr. THOMAS moved a vote of thanks to the Chairman, the speakers, and Mr. and Mrs. Taylor. In doing so he said he did not know how people could allow vivisection to continue, and that if for every idle word man would have to give an account at the last, he asked how they would stand who practised and tolerated such cruelty?

The motion was carried, and the meeting then concluded.

THE WESTON-SUPER-MARE BRANCH.

The Annual Meeting of this Society was held in the Gymnasium of the Y.M.C.A. on Tuesday evening, February 16th. The chair was taken by James Pemell, Esq., local Hon. Secretary of the S.P.C.A.

The CHAIRMAN, in his opening address, spoke strongly against the cruelties of vivisection, quoting the scripture text "The cattle upon a thousand hills are mine," and reading with much feeling the verse on the announcement bill—

"So many gods, so many creeds,
So many paths that wind and wind;
While just the art of being kind,
Is all this sad world needs."

The Society's report for 1895 and 1896 having been read and its adoption moved, the Rev. R. S. LATIMER, in seconding the motion, said the fact of the toleration of vivisection made one blush for one's kind. Pressure should be brought to bear upon the medical profession. Even such faiths as the pantheism of India, which saw an incarnation of God in every

living thing, or the Oriental doctrine of reincarnation, would help to rescue science from the barbarism of vivisection.

Mrs. CHARLES MALLET, of London, said she had to speak mostly to a converted audience. She could have wished it otherwise, as a certain assumption was running through most sections of the world that experiments upon animals were most important and vital in diminishing the sum of human pain. People looked upon vivisectors as benefactors of the world; and those conscientious people were strongly ashamed to oppose vivisection. She appealed to the evidence of the medical faculty for the last 25 years, during which vivisection had become so common, and the verdict of the scientists of that day and of this showed that the practice was as cruel as useless. Mrs. Mallet concluded an excellent address by proposing the resolution, "That seeing that vivisection is useless, inexpedient, and morally unjustifiable, this meeting records its protest against it, and its opinion that the practice should be prohibited by Act of Parliament."

F. A. HYNDMAN, Esq., barrister, in seconding the resolution, congratulated Mrs. Mallet on her able address. He had never heard from what was called the superior sex a more masterly oration. He remarked on the inconsistency of thousands of people going to see the "Sign of the Cross," while indifferent to the atrocities of vivisection.

The CHAIRMAN then put the resolution to the meeting, and it was unanimously approved.

Mr. H. WOLSTENHOLME having proposed a vote of thanks to the chairman, which was seconded by the Rev. C. H. CLARK, and strongly approved by the audience, the proceedings terminated.

LONDON—NORWOOD.

A meeting convened by public notice was held in the Welcome Hall, Norwood, on Wednesday evening, the 28th ult., Dr. Edward Haughton presiding. The Chairman opened the proceedings, and was followed by Mr. R. S. Wood, Mr. A. Westcott, and the Rev. E. S. Manbey, who spoke with much ability and freshness. The following resolution was carried with only two dissentients:—"That Vivisection is scientifically and morally wrong."

MEETING IN THE CITY.

On the afternoon of Thursday, the 18th ult., a meeting, largely attended by female post-office clerks and others, was held in the schoolroom of Falcon Square Chapel, Aldersgate, City, and addressed by the Rev. Thos. Perkins and Mr. T. A. Williams. Much interest was exhibited, and the ground for a permanent mission is believed to have been laid.

BOLTON (LANCASHIRE).

A drawing-room meeting, promoted by the Misses Wolfenden, was held at Westwood, Bolton, on Thursday, the 18th ult. The chair was filled by the Rev. T. J. Street, M.A., LL.B., and a masterly paper was read by Mrs. Herbert Philips, of the Manchester Society. A number of questions were afterwards put, to which Mrs. Philips satisfactorily replied. A resolution, condemning the practice of Vivisection and inviting its local opponents to band themselves together to secure its abolition by forming a society in Bolton in aid of the Cause, was put and carried *nem. con.* The Chairman, in the course of the proceedings, delivered an eloquent and heart-stirring appeal, urging that the moral ground for the abolition of such torture was in itself sufficient without any further argument. Mrs. Philips was heartily thanked for her attendance and address.

CORRESPONDENCE.

CRUEL AND SENSELESS VIVISECTIONS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I should like to call the attention of the readers of your columns to the cruel and purposeless vivisection which is carried on by some of our educational bodies.

The students taking the Preliminary Scientific Examination at the University of London in January last, were required to dissect out the nervous system from a *live* fresh-water mussel

(*Anodon*). This cruelty is entirely wanton, for the mussel is quite as easy to dissect after being killed, by immersion in boiling water, as when alive. The University, however, is not the only body which encourages this vivisection, for it is also carried on at some of our colleges, and notably at University College, London.—Yours truly,

S. HASTINGS.

Halvergate, Edgware, London, 14th February, 1897.

THE STAMPING OUT OF RABIES.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—The Departmental Committee appointed by the Board of Agriculture, which has been taking evidence as to the value of the muzzle as a means for the prevention of rabies in dogs, and as to the best way in which that plan can be carried out, has arrived at the conclusion that it would be advisable to re-establish the principle of centralized control, the effect of which, if carried into practice, would be to give the Board of Agriculture powers to force any given district to adopt the muzzling order.

There is, of course, such a thing as rabies (though what is meant by that term is not by any means understood), not only in dogs, but in other animals. As a matter of fact, however, very few dogs really go mad, though very many are killed under the supposition that they are so, when in reality they are only afflicted with fits; sometimes only morose or ill-tempered, because of some ill-usage, excitement, or some other cause of that sort. There is no doubt that a muzzled dog is put to a good deal of discomfort and illness, and thus the muzzle is an instrument of torture tending rather to promote rabies than to check it. Muzzling, to be effective, must be absolutely perfect; but such perfect muzzling would be impossible. In some countries abroad, universal muzzling has been adopted, but it has not extinguished rabies, nor, it is asserted, has it at all diminished its frequency, as was anticipated.

In connection with this subject, may I say a word as to the value of the Buisson bath in the treatment of hydrophobia. It is the beauty of this treatment that it is not only effective, but that it is so simple and so easily applied that it may be available in the poorest hovel in the land. Friends who have watched with intelligent sympathy the increasing interest taken in this treatment will rejoice to learn that the Government of India has intimated to Mr. F. E. Pirkis, R.N., that facilities will be afforded for the placing of Buisson baths in Government Hospitals in India.—Faithfully yours,

JOSEPH COLLINSON.

Wear Cottage, Wolsingham, February 10th.

"FOR THE QUEEN"—A SUGGESTION.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—May I crave a portion of your valuable space to suggest a method by which Anti-vivisectionists might celebrate the present notable occasion? It is well known that the gracious lady who for sixty years has ruled over this great Empire is strongly opposed to vivisection; but it is, alas! equally certain that the mass of her subjects, owing chiefly to insufficient information, do not in this matter follow her excellent example. Now, as it is from public opinion, and not from the personal views of the sovereign, that legislation must originate, it has seemed to me that we, who know what vivisection really means, cannot better signify our loyalty than by making a determined effort to stir the public conscience in the matter that we have so much at heart. And what better method could we devise for effecting this desirable end than a system of *judicious advertisement*? That advertising is at present the *only* way to reach the general public I am more than ever convinced, because the press is, almost without exception, rigidly closed against us, and public meetings would certainly be a failure owing to the extreme unpopularity of the subject.

But advertising to be effective must be *judicious*—

(1) The posters must be *large*; I would suggest the size known as "double royal," about 3 feet 6 inches by 2 feet 3 inches.

(2) There must be *little on them*, and that very clear.

(3) They must be attractive looking, and preferably printed on tinted paper.

(4) They must be well exhibited: one well placed is better than six hidden away.

(5) There must be a total absence of sensationalism or anything that our opponents can take hold of. There are plenty of noble words on the subject by such men as Lord Shaftesbury and Bishop Westcott, and also many most telling pronouncements by Vivisectors themselves, *e.g.*, Dr. Klein's notorious confession. Nothing better than these could possibly be put before the public.

I have made a humble beginning in my own neighbourhood by designing such posters and having them exhibited in various good positions: but the scheme, to be properly carried out, will require organization and co-ordinated endeavour. My own idea is that if a small and experienced committee would undertake the preparation and printing of (unsigned) posters in *large* quantities, local committees could see to their exhibition in various districts. These local committees could order the number they would require, and could in this way obtain them at a very much cheaper rate than if they had them printed on their own account. Moreover, they would obtain posters that would probably be much more effective than if they were of their own design, while, if necessary, a strip of paper pasted on the bill could refer inquirers to the local "hon. sec."

Apologising for troubling you and trusting that others will be moved to take up this question of advertising.—I am, etc.,

ALFRED J. ALLEN.

London Institution, Finsbury Circus, E.C., Feb. 13, 1897.

HOME INTELLIGENCE.

THE SCOTTISH SOCIETY.

EDINBURGH.

A meeting was held at Mrs. Eadie's, Chalmers' Street, on the 9th February, the Rev. John Baird presiding.—The CHAIRMAN, in opening the meeting, made feeling reference to the great loss the Society had sustained by the death of Mrs. Nichol.—Rev. Dr. KERR, of Glasgow, then addressed the meeting, discussing specially the statements made by Professor Rutherford, an Edinburgh vivisector, in his recent letter to the *Scotsman*. It was encouraging to learn that some students could not bear the heartless operations of the professor's laboratory, and while their professor publicly branded them as young men of mediocre talent, they were certainly young men of humane feelings—qualities Professor Rutherford did not seem disposed to commend. Had his inhuman operations blunted his faculty of appreciating such excellences? The Professor's contention that the animals were under *anæsthetics* proved him far beneath the "accomplishments" of the most eminent vivisectors, for they proceeded with experiments without any regard for the sufferings of their victims. If the horrified students were young men of little talent, how much did the professor lack in tenderness?—The Rev. WM. ALLAN, M.A., and Col. WATERSTON also took part.

On Tuesday, the 16th February, a prayer meeting was held in the Bible Society's Rooms, 5, St. Andrew Square, Mr. George McRobert, Missionary, presiding.

GLASGOW.

A prayer meeting was held in the Protestant Alliance Room, Argyll Arcade, Glasgow, on Tuesday, the 9th of February, when W. C. Maugham, Esq., J.P., presided. [We regret to state that about twenty-five medical students attended evidently for the purpose of making a disturbance under the pretence that, although it was advertised as a prayer meeting, they thought it was a public one.]

A meeting was held in the Ladies' Seminary, Melville Street, Pollokshields, on Wednesday, the 17th of February. Col. Waterston presided, and there was a large attendance. Mr. George McRobert gave an address on "The Uselessness of Vivisection." Several questions were asked and a large amount of literature distributed.

FOREIGN INTELLIGENCE.

GERMANY.

VIVISECTION EXPERIMENTS.

The *Thier-und-Menschenfreund* for January publishes the following:—

From *Virchow's Archiv.*, vol. 137, p. 77:—"Study of cells of the cornea when it is subjected to irritants. For this purpose, seven rabbits were operated upon. In each case the cornea of one eye was cauterized with lunar caustic, and a slight incision made in that of the other. The result confirmed the accepted theory of inflammation and revealed nothing new. (A more fiendish way of conducting a 'study' in the mere hope of discovering something, no matter what, can scarcely be imagined.)"

From *Archiv für experimentelle Pathologie*, vol. 38, pp. 286-304:—"Comparative experiments in cooling and varnishing. Prof. R. Winternitz, after experimenting on rabbits, came to the conclusion that the sickness and death of animals who had been coated with varnish, was due to the lowering of the temperature at the surface of the body; and that *vice versa* by checking the giving off of heat by the body, death was retarded, and even prevented. The idea that the absorption of the products of the varnish, the retention of the secreted matter, and the irritation of the nerves of the skin, were responsible for the appearances produced in death by varnishing could not be proved. ('Animals horribly tortured and nothing proved is indeed a brief summary of the result of nearly every one of these experiments.')

From the *Centralblatt für Allgem. Pathologie*, March 15, 1895:—"Changes in the vascularization of the kidneys produced by ligature of the ureters. Dr. W. Lindemann reports that he made a series of experiments to elucidate the question of the Pathogenesis of Hydronephrosis (*i.e.*, the pain in the nerves caused by retention of the urine), and that on several occasions at the autopsy of the animals used for the experiments, he had the opportunity of observing the great changes in the vascularization of the kidneys produced by the operation. (Anyone who has experienced in the slightest degree the pain caused by the prolonged retention of the urine will understand the sufferings of these poor dogs done thus cruelly and uselessly to death)."

GENOA.

THE RESCUE OF STRAY DOGS FROM THE LABORATORIES.

We take the following further information on this painfully interesting subject from the *Supplemento al Caffaro* of Genoa, of the 20th of January:—

A meeting of sportsmen and owners of dogs took place on January 18th, under the chairmanship of Signor Carpinetti, President of the *Federazione Ligure*, and editor of the *Unione Cacciatori Liguri*. It was attended by the pick of the members of several clubs connected with sport, and by representatives of those of Spezia and Savona. Professor Massone appeared on behalf of the Society for the Protection of Animals. The meeting, which was of a serious and orderly character, after having expressed disapproval of several vexatious regulations as to the ownership of dogs and other matters of local interest concerning sport, unanimously voted the following resolution:—"Considering that the dogs committed to confinement by the authorities and intended to be got rid of should, according to the rules still extant, be either destroyed or sold by auction, and not given up arbitrarily to biological laboratories, we request the municipal board of the town of Genoa to put a stop to the disgrace of handing over regularly these animals to the aforesaid laboratories."

VIENNA.

TOLERATED BARBARITY.

The *Anwalt der Thiere* publishes an extract from the *Oesterreichischer Volksfreund*, from which we take the following:—

The dog tax is payable in Vienna at the beginning of each year, with the result that many dogs are turned out of doors in the depth of a Continental winter, to take their chance of finding a new master willing to pay the tax. We can see

one of these poor creatures. It has nothing to eat, and shivers with cold. It looks anxiously about for a new master who shall give it food and shelter. A man approaches and offers it some food. The dog takes it eagerly and looks up to the giver with an expression of gratitude. The man passes a cord round its neck and leads it away. In the suburbs there is a long building where the man enters with the dog, by a back entrance, but comes out again alone placing hurriedly in his pocket the two florins he has just received. Let us enter later the lecture room of the Professor of Anatomy. Our dog is there, with brain exposed, and whining piteously. The lecturer proceeds to explain that the brain of his victim is uninjured, but that as soon as he removes a certain portion, the cry of the dog will cease. It is done, and the dog is still. After that, the remainder of the brain is removed, piece by piece, from the living, sentient creature in order to illustrate this or that point in the professor's discourse. Finally the poor mutilated head is severed from the body, illustrating yet something more."

UNITED STATES.

THE AMERICAN ANTI-VIVISECTION SOCIETY.

The fourteenth annual meeting of the American Anti-vivisection Society was held on Friday, January 29th, at 118, South Seventeenth Street, Philadelphia, Dr. Matthew Wood presiding.

Interesting reports were made by the secretary, corresponding secretary, and treasurer.

President WOOD, in his address, said in part: "There has been a great increase of vivisection. Physicians receive publications with deceptive titles referring in a casual way to the effectiveness of certain animal products in certain otherwise unmanageable diseases, and it is not until the reader has invested in or prescribed the so-called remedies that he discovers that the paper he has been receiving gratis for months is owned and controlled by the firm that produces the 'remedies.' Again, there are men who scorn this sort of commercial work, who pursue vivisectional research for the honourable emoluments—fame, position, money or consciousness of having added to the sum of human knowledge. It is to protect these, and also, perhaps, because of a hope that some good may come from their researches and also because of ignorance of what vivisection really is, that so many of the profession are opposed to all legislation against it. These men claim that typhoid fever, pneumonia, cholera, consumption, diphtheria, and many other diseases are now the merest child's play to the enlightened practitioner because of the discoveries of vivisectionists. We appeal from the bold assertions of our antagonists. We aim to abolish cruelty, and recommend that the society should change its method of combating the evil, and search out, under capable medical direction, all varieties of cruel work by vivisectionists, and, giving it the widest publicity, mention the name and address of the perpetrator in every case."

The principal officers of the society were reappointed as follows:—President, Dr. Matthew Wood; vice-presidents in Philadelphia, Dr. William R. D. Blackwood, Henry Flanders, Stephen Farrelly, Rev. J. Andrews Harris, Mrs. Wayne MacVeagh, Algernon Sidney Logan, Benjamin B. Comegys and Samuel Castner, jun.; secretary, Miss Adele Biddle; treasurer, Samuel Hinds Thomas; corresponding secretary, Mrs. Richard P. White; counsellors, Mr. Richard P. White and Mr. Charles Biddle.

A GENERAL SURVEY.

Mrs. Fairchild Allen, under date Aurora, Ill., February 2nd, writes as follows:—

"We do not yet know the fate of the Washington (D.C.) Bill now before the Senate, only that the subject is being actively discussed by both sides, and the pro-vivisectionists are making strenuous efforts to defeat it. The petition for the total abolition of vivisection which for some time has been in circulation by the Illinois Society has received to date, February 2nd, 18,701 signatures, including those of 489 physicians and surgeons. The petition has not been pushed at all, all the signatures having been obtained as the workers had time and opportunity; but the result has greatly strengthened the position of the Anti-vivisectionists all over the country. Our

Society now has 127 vice-presidents, all doing or giving—most of them actively working—and representing nearly every State, from Maine to California. The publication of tracts and leaflets is vigorously prosecuted.

"Dr. Edward C. Spitzka, the well-known medical expert of New York city, has startled his professional brethren by announcing his utter disbelief in the existence of hydrophobia, and declaring the Pasteur methods a cheat and a humbug; and it is stated in the newspapers that an Anti-Pasteurian League is to be organized in New York City to demonstrate the correctness of his conclusions. Many other eminent medical authorities there endorse Dr. Spitzka's opinions.

"At Cincinnati, Ohio, the faculty of Laura Memorial College proposes to establish a vivisectional laboratory, and states that the apparatus for the purpose is already on its way from Germany. This College is endowed by Mr. Alexander McDonald in memory of his daughter Laura, who died last year under the surgeon's knife. One would suppose Mr. McDonald would pursue just the opposite course, but the experimentalists seem to have hypnotized him to this extent. The Ohio Humane Society will have much to say upon this scheme, and the people near the college, I am told, are up in arms against it. Our vice-president at that point is very active now in the distribution of our literature, and the physiologists are correspondingly indignant. We may not be able to prevent the establishment of the laboratory, but we can at least greatly interfere with the enjoyment of it.

"Illinois newspapers are aiding the cause in our State by giving columns to the subject of vivisection, and publishing our cuts in connection therewith. This attracts much attention to the practice. People are astonished at the facts, and also at the secrecy which has been hitherto so closely observed that they knew nothing of them.

"In the State of Washington (the far west) there is good prospect of the success of the Bill to prohibit vivisection and dissection in the public schools. The Bill passed both Houses last year, but was vetoed by the Governor. The new Executive heartily endorses it. I am confident of complete victory in the end."

THE ARGUMENTS OF THE OTHER SIDE.

Our satirical and humorous contemporary, *Life*, New York, January 28th, had the following:—

"Fair play is a jewel; the vivisectionists have some arguments on their side. A careful study of their literature shows the following strong reasons for allowing the practice to continue unchecked."

"First, it is a humane practice. The vivisectionists say so themselves, and they ought to know. To the outsider it does not at first sight seem probable that cutting or tearing a living animal, breaking or dislocating its limbs, baking it in a hot oven, or tracing out the course of the most sensitive nerves, can be an enjoyable operation for the subject, but this is a mistake of the non-scientific mind. Besides, not one in ten of those who object to these things have ever witnessed an actual operation, and how can they pretend to know whether a thing they have not seen is painful or not?"

"Vivisection is useful. Certain operations conducted by successful operators in the past led to valuable results. Therefore it is evident that it is of the highest usefulness to repeat these experiments, and any others that can be devised, yearly, before every class of every medical college in the country. If anyone fails to see the connection, it is plain that he lacks the logical training given by a course in vivisection."

"Vivisection is immensely elevating and improving to those who practise it. What can be better fitted to develop in a young man a true reverence, refinement and desire to relieve pain than hacking and torturing a bound and helpless animal? It might be better, certainly, if the subject were a human being, but to some extent this lack can be supplied when the student begins his hospital practice."

"Finally vivisection is no affair of the public's, anyhow, and it would be well if people would stop talking of what doesn't concern them, and of what they know nothing about. The vivisectionists are quite capable of managing the whole affair, and when they want the help of the public they will call on them."

P. C. A. NEEDLEWORK GUILD.

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- 4.—"Do the Interests of Mankind Require Experiments on Living Animals? If so, up to what point are they justifiable?" By BISHOP BARRY.
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- 22.—"A Dog being Dissected Alive!"
- 23.—"Commentary on the Cruelty to Animals Act, 1876," by LORD COLERIDGE, Q.C.
- 24.—Publications of the Victoria Street and International Society for the Protection of Animals from Vivisection.
- 25.—List of Vice-Presidents, Committee, Hon. Members, Branches, and Officers.

LONDON:
THE VICTORIA STREET AND INTERNATIONAL SOCIETY,
20, VICTORIA STREET, S.W.

Victoria Street Society

FOR THE PROTECTION OF ANIMALS FROM VIVISECTION

UNITED WITH THE

International Association

FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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The object of the Society is the Total Abolition of the practice of Vivisection as defined in the Report of the Royal Commission.

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Victoria Street and International Society for the Protection of Animals from Vivisection.

REPORT OF THE LECTURE DEPARTMENT, 1896.

THE Lecture Fund, started at the suggestion of Mr. Phillips, of Macclesfield, after the Nottingham Anti-vivisection Conference in the late autumn of 1893, has now completed the third year of its existence, and the Committee of the Victoria Street Society take this opportunity of expressing their heartiest thanks to those friends who have kindly and liberally supported this fund.

The Committee hope that the list of lectures delivered during the year, which is appended hereto, will be considered the best evidence of their appreciation of the fund placed at their disposal, and their earnest wish to turn it to the best account.

The work of Mr. ARTHUR WESTCOTT, who has now been employed by the Society for six years, is too well known to need many words of comment. His special efforts are directed towards the Working Men's Clubs in the winter months, where his lantern lectures are greatly appreciated. In the summer months he speaks regularly in the Parks and other public places. In those outdoor meetings it is no unusual thing for medical men or students to speak in opposition, and some very animated discussions have at times taken place, in which Mr. Westcott has always shown himself equal to the occasion. His extraordinary grasp of the subject, the result of constant practice, and the frequent humorous touches with which he enlivens a naturally sombre subject, are much appreciated by his audiences, and those who hear him once generally want him to come again. He has during the year been working on five distinct lectures, entitled—(1) "The Institute of Preventive Medicine: What it will do, and how it will do it;" (2) "A Modern Inquisition: Its Victims and how they are Tortured;" (3) "Pasteur: His Work and its Results;" (4) "Vivisection in Hospitals: A Danger to the Poor;" (5) "What has Vivisection done for Humanity?"—for three of which he has lantern illustrations.

Mrs. CHARLES MALLET, for many years a prominent worker in various political and humane causes, has again this year been willing at all times to speak for the Society when opportunities have offered. Her addresses have been mostly at meetings of the Women's Liberal Associations, Women's British Temperance Associa-

tions, and Women's Progressive Union, together with some Debating Societies. In this connexion, as partly due to Mrs. Mallet's exertions, one signal triumph of the Anti-vivisection cause deserves to be recorded.

Three or four years ago it seemed hopeless to expect that the Executive Committee of the Women's Liberal Federation (a large organization numbering nearly 100,000 women in its ranks) could ever be induced even to place the subject of Vivisection upon the agenda of their Annual Council meeting for discussion. By dint, however, of patient and persevering endeavour on the part of several persons and Associations, and partly, perhaps, as the result of lectures delivered in Manchester and many of its suburbs, in Sheffield, in Plymouth, and elsewhere, large majorities in favour of the total prohibition of vivisection were secured in the Council meetings of 1895 and 1896; and this in spite of the fact that Mr. Victor Horsley and another doctor attended the meeting in the character of delegates from two Women's Liberal Associations (they being the only two persons of the male sex present in the meeting), and made the strongest appeal to the women present not to vote against experiments on living animals.

Mr. T. A. WILLIAMS, whom your committee are always glad to welcome as a visitor from the Bristol and Clifton Society, has again rendered the Society valuable service during a three months' campaign in Derby, York, Leeds, and Hull, where he addressed numerous meetings, and distributed upwards of 48,000 pamphlets, etc. At Leeds the work extended over a fortnight, and our local supporters were so pleased with the impression he made, that before he left they arranged that he should return at an early date, and this will be carried out during the present month, when he will enter on another engagement with your committee for a three months' campaign in London, the home counties, etc.

Those who look over the list will notice three new names; not hitherto found amongst the Society's workers, Mr. R. Somerville Wood, Miss Alison Garland, and the Rev. T. Perkins.

Mr. Wood, a cultured speaker, is a graduate of Oxford University, and was, in his undergraduate days, the President of Exeter College Debating Society. Having during the year, joined the anti-vivisection ranks, he has

entered into the propagandist work with great energy, and the committee think they are to be congratulated on having enlisted so able and enthusiastic an ally. As his special work, in addition to speaking whenever called upon, Mr. Wood has undertaken the organization of the Working Men's Branches, which are steadily increasing in numbers.

Miss ALISON GARLAND is also a practised speaker, known as a lecturer on political and social matters, including the somewhat abstruse subject of Bimetallism. As she, too, has lately become interested in the animal question, the Committee have been glad to secure her help in introducing the subject into new circles.

Mr. PERKINS, the latest new friend, has also lent his aid on a few occasions, which, it is hoped, may in the future be multiplied.

The most important anti-vivisection work of the year has been in regard to the Pasteur Institute now in course of erection on the Chelsea Embankment. In this the Society has been able to render service, especially through the exertions of Mr. Wood, not merely in addressing meetings, but much more in canvassing the neighbourhood, collecting signatures for the petition, and helping at the temporary offices opened in the district.

The following extracts, taken from Mr. Westcott's reports for two consecutive weeks, will give an idea of the influence which is being brought to bear on various classes of the community :—

On Sunday Morning, November 15th, I gave my lecture on "Vivisection in Hospitals" at the Borough of Bethnal Green Radical Club. Mr. F. Saunders, Hon. Political Secretary, presided. Eighty-seven members were present. The audience listened to the lecture with great attention, and followed every point with the keenest interest. Several questions were asked, and a short discussion followed. The usual votes closed the meeting.

Sunday Evening, November 15th, I lectured before the members of the Kensal Town Branch of the S.D.F. at their rooms, Carlton Bridge. There was a very fair audience. The lecture was followed with marked interest, and a very interesting discussion followed.

Monday, November 16th, I gave my lantern lecture on Pasteur to a large audience at the Patriotic Club, Clerkenwell. The room was crowded; many people were standing at the back of the room, and some were sitting on the floor in front of the platform. Great interest was taken in the subject, a few questions were asked, and a short discussion followed. The President of the Club occupied the chair, and in moving the vote of thanks for the lecture, invited me to lecture before them again, saying he hoped it would be soon, as they could not afford to let grass grow under their feet when such terrible things were going on around them. He hoped everyone present would read the literature which had been given them, and would think over what they had heard and the pictures they had seen, and do something to put a stop to such practices.

Tuesday, November 17th, I gave my lantern lecture on "Pasteur," at the Social Club, South Bermondsey. Only about thirty people were present, and we had to wait until nine o'clock before that number was made up. The Chairman, in opening the meeting, said that a great many of their members attended some classes which were held on Tuesdays at a neighbouring club. That, no doubt, accounted for the small audience.

Wednesday, November 18th, I gave my lantern lecture on "Pasteur" before a good audience at the Christchurch Working Men's Club, Cumberland Market, Regent's Park. Mr.

McIntosh presided. A few questions were asked, after which Mr. Wood spoke, and proposed the formation of a Working Men's Branch. The matter was settled by a proposal that the Secretary should collect the names and send them on.

Thursday, November 19th, I lectured at the Christchurch Schools, Isle of Dogs. The meeting was arranged by the Progressive Club at that place. Miss Bessie Biddlecombe, the assistant secretary Metropolitan Radical Federation, presided, and made a very nice little speech in opening the meeting. She spoke very warmly of the Working Men's Branch, saying that she believed that she could claim to be one of its first members—(she is quite correct, she joined at the Paddington Radical Club, when first the Branch was started)—and she had much to thank the Society for, as they had sent her literature from time to time, so that she had been able to keep herself posted up on the subject. The audience was a very large and enthusiastic one, over three hundred adults being present. A short discussion followed my lecture, after which I invited those present to join the Working Men's Branch. Many handed in their names, and over sixty have since been enrolled by the secretary of the Club. I enclose a letter from Mr. Finden. It was suggested that I should address a meeting at the other end of the Island. I have consented, providing they can secure a good hall free of charge, and that the Club will organize the meeting. They have consented to do so. These men at the Isle of Dogs mean business in everything they undertake. They pride themselves on the success of their "Clubs inside their club," and I have no doubt that our Branch on the Island will be a great help to us in that part of London. I have sent on the medals as Mr. Finden requests.

I am glad to be able to say that our meetings become more popular every week. This present week, so far, has been one of the most successful I have ever had. I had an audience of nearly 1,000 people at the Jewish Club, Bell Lane, E., on Monday last, and they followed the lecture with a keen interest. I received a very hearty invitation to lecture again, and promised to do so.

I enclose my list of engagements for the week ending Thursday, December 3rd.

On Sunday Evening, November 22nd, I addressed a very well attended meeting at the Folks' Hall, Dalston Lane. My subject, "Vivisection: A Danger to Hospital Patients," was listened to with deep interest. A great many questions were asked and a good discussion followed. I was asked to occupy their platform again early in the new year.

On Monday, November 23rd, I gave my lantern lecture on Pasteur before nearly 1,000 adult Jews at the Netherlands Club, Bell-lane, E. The meeting was timed to start at 8.30, but by 8 p.m. the large hall was full, every seat was taken, and men fresh from work stood wherever they could find room. I have never stood before a more sympathetic and enthusiastic audience. Every picture illustrating a vivisection, such as "Trepanning a Rabbit," was met with cries of "Shame," "Cruelty," "Brutes," whilst our last picture, "Save me; I would save you," was received with great cheering and applause. Mr. Shetizki, president, was in the chair, and was supported by Mr. Danziger, vice-president, Mr. Posner, secretary, and also Mr. Barnet, treasurer. I enclose a short report of meeting, which appeared in the *Club World* for Saturday last.

On Tuesday, November 24th, I gave my lantern lecture on "Vivisection" before the members and friends of the Marylebone Branch of the I.L.P. at their Hall in Tottenham Street; about sixty were present. Deep interest was taken in the subject, and a good discussion followed. The members agreed to make it a practice to question all parliamentary and other candidates for their views on the question.

On Wednesday, November 25th, I gave my lantern lecture on "Pasteur" at the Liberal Club, Dartford. Mr. Henning presided, and, as usual, the hall was crowded. Great interest was taken in the subject and many questions were asked, and a short discussion followed.

On Thursday, November 26th, I opened a discussion on "Vivisection" at the rooms of the Lambeth Branch of the S.D.F. There was a fair muster of men, and many spoke or asked questions on the subject. It was finally resolved that our question was one worthy of the attention and sympathy of every working man and woman, and the members pledged

themselves to support us by every means in their power. They promised to raise the question at every election in which they have a vote or any power.

I have distributed nearly 1,500 pamphlets during the week. I have enrolled nearly 100 new members for the Working Men's Branch. I will hand you the names and pennies in a day or so, as I am waiting for some of the club secretaries to send me their lists.

To continue the work on the same scale as last year, including travelling expenses, hire of halls where necessary, printing handbills, etc., an income of at least £600 a year is required. The subscribers to the original scheme in most cases promised donations for three years. These having now been all paid the fund is greatly reduced, and friends are earnestly requested to renew their promise for another period of three years, in order that

this work, which the Committee consider of the highest importance, may not be allowed to be in any way curtailed.

As time goes on it becomes more and more apparent that the battle for the lower animals in all its branches can only be carried to a successful issue by a general education of the humane feeling in all classes of the community, and in no way can this be forwarded better than by constantly bringing up the subject at public meetings as is done by our Lecture Fund.

ERNEST BELL,

Chairman of Committee.

January 27th, 1897.

RETURN OF LECTURES AND MEETINGS FOR 1896.

THE following is a return for the year 1896 of the lectures and meetings arranged at the instance of the Victoria Street and International Society, which have taken place as stated below, the expenses being defrayed out of the Special Lecture Fund:—

DATE.	SPEAKERS.	PLACE OF MEETING.	DATE.	SPEAKERS.	PLACE OF MEETING.
1896.			1896.		
Jan. 5	Mr. A. Westcott	Radical Club, Walworth	Mar. 8	Mr. A. Westcott	Radical Club, Westminster Bridge Road
" 12	" "	Gladstone Club, North Brixton	" 8	" "	Liberal Club, Lambeth
" 12	" "	St. George's Hall, Regent Street	" 9	" "	"
" 13	" "	Parochial Hall, Brixton	" 9	Mr. Benjn. Bryan	St. George's Catholic Club, Southwark
" 15	" "	Radical Club, Central Finsbury	" 9	Mr. R. S. Wood	"
" 16	" "	Radical Club, N.E. Bethnal Green	" 10	Mrs. Chas. Mallet	St. Clement's Parish Room, Notting Hill
" 17	" "	Gresham Hall, Brixton	" 13	Mr. A. Westcott	Enfield Lock
" 18	" "	St. Pancras and Brixton	" 15	" "	New Reform Club, Peckham
" 19	" "	Working Men's Club, Dartford	" 15	" "	Liberal Club, Clapham
" 20	" "	Bye Election, Brixton	" 15	Mr. R. S. Wood	Lavender Hill, Battersea
" 21	" "	Progressive Club, Stockwell	" 19	Mr. A. Westcott	Enfield Lock
" 22	" "	Cleveland Hall, St. Pancras	" 19	" "	Progressive Club, I. of Dogs
" 23	" "	"	" 20	Mr. R. S. Wood	"
" 24	" "	St. Pancras and Brixton	" 20	Mr. A. Westcott	Royal Institute
" 25	" "	Brixton	" 22	" "	Working Men's Club, Dartford
" 26	" "	Liberal Club, Deptford	" 23	" "	Enfield Lock and Waltham Abbey
" 26	" "	Liberal Club, Wimbledon	" 24	Mrs. Chas. Mallet	Armagh Chapel, Bow
" 27	" "	"	" 25	Mr. A. Westcott	Reform Club, Newington
" 28	" "	Brixton	" 25	Mr. R. S. Wood	"
" 29	" "	"	" 25	Mr. A. Westcott	Reform Club, Newington
Feb. 3	" "	Emmanuel Hall, Paddington	" 26	" "	Enfield Lock
" 5	" "	Radical Club, Boro' of Bethnal Green	" 28	Mrs. Chas. Mallet	Blind Asylum Hall, Bristol
" 5	Mrs. Chas. Mallet	Y.M.C.A., Oxford	April 2	Mr. A. Westcott	"
" 9	" "	Andover Hall, Whitechapel	" 3	" "	Sheffield
" 12	Mr. A. Westcott	Baths, Lambeth	" 4	" "	"
" 14	" "	Rifle Factory, Enfield	" 5	" "	"
" 16	Mrs. Chas. Mallet	Kelmscott House, Hammersmith	" 7	" "	Gasworks, Old Kent Road
" 16	Mr. A. Westcott	Liberal Club, Dulwich	" 8	" "	Peak Frean's Biscuit Works
" 17	" "	Boiler Works, Bermondsey	" 9	" "	Doulton's Potteries
" 18	Mrs. Charles Mallet	Old Ford	" 10	" "	South Bermondsey
" 19	Mr. A. Westcott	Bristol Road Board School, Birmingham	" 10	" "	Hyde Park
" 20	" "	"	" 12	" "	Working Men's Club, Isle of Dogs
" 21	" "	Liberal Club, Deptford	" 12	" "	Deptford Broadway
" 23	" "	Working Men's Club, Dartford	" 13	" "	"
" 23	" "	Engineering Works, Pimlico	" 13	Mr. Benjn. Bryan	St. George's Catholic Club, Southwark
" 24	" "	Burrage Institute, Paddington	" 13	Mr. R. S. Wood	"
" 24	" "	Commercial Docks	" 13	Mr. H. N. Ferrers	"
" 28	" "	"	" 15	Mrs. Chas. Mallet	"
Mar. 1	" "	Radical Club, Central Finsbury	" 15	Mr. Benjn. Bryan	"
" 1	Mr. R. S. Wood	"	" 15	Mr. A. Westcott	Public Hall, Rye Lane, Peckham
" 2	Mr. A. Westcott	Truth Society, Peckham	" 15	Mr. R. S. Wood	"
" 2	" "	Peak Frean's Biscuit Works, Dockhead	" 15	Miss Jessie Craigen	"
" 4	" "	Price's Candle Factory, Battersea	" 15	Mr. Cyril Drew	"
" 5	" "	Unity Church, Islington	" 15	Mr. A. Westcott	Engineering Works, Pimlico

DATE.	SPEAKERS.	PLACE OF MEETING.	DATE.	SPEAKERS.	PLACE OF MEETING.
1896.			1896.		
April 16	Mr. A. Westcott		June 21	Mr. R. S. Wood	Regent's Park
" 17	" "	Hyde Park	" 21	Mr. A. Westcott	" "
" 18	" "	" "	" 22	" "	Hyde Park
" 19	" "	Liberal Club, Deptford	" 23	" "	Battersea
" 19	" "	Kennington Park	" 23	" "	Hyde Park
" 20	" "	Hyde Park	" 24	" "	Price's Candle Factory, Battersea
" 21	" "	Baptist Chapel, Gravesend	" 25	" "	Hammersmith Bridge
23-30	Mr. T. A. Williams	York	" 26	" "	Nine Elms Lane
" 23	Mr. A. Westcott	Hyde Park	" 26	" "	Hyde Park
" 24	" "	" "	" 28	" "	Regent's Park
" 26	" "	Regent's Park	" 28	Mr. R. S. Wood	" "
" 27	" "	" "	" 29	" "	Doulton's Potteries, Lambeth
" 28	" "	Hyde Park	" 29	Mr. A. Westcott	" "
" 30	" "	" "	" 29	" "	Hyde Park
" 30	Mr. R. S. Wood	St. Charles Debating Society, Notting Hill	" 29	Mr. R. S. Wood	Nevern Terrace
May 1-7	Mr. T. A. Williams	Leeds	" 30	Mr. A. Westcott	Battersea
" 1	Mr. A. Westcott	Hyde Park	" 30	" "	Hyde Park
" 3	" "	Regent's Park	July 1	" "	Grosvenor Road
" 4	" "	" "	" 2	" "	Battersea
" 4	Mr. R. S. Wood	Hyde Park	" 2	" "	Hyde Park
" 5	Mr. A. Westcott	" "	" 2	Mr. R. S. Wood	Stanley Works, Chelsea
" 6	" "	Pimlico and Chelsea	" 3	Mr. A. Westcott	" "
" 7	" "	Battersea and Pimlico	" 4	" "	Hyde Park
" 8	" "	Holborn and Westminster	" 4	Mr. R. S. Wood	" "
" 8	" "	" "	" 5	" "	Regent's Park
" 8	Mr. R. S. Wood	Hyde Park	" 5	Mr. A. Westcott	Wilkinson's Sword Factory, Chelsea
" 10	Mr. A. Westcott	Regent's Park	" 6	" "	" "
" 10	" "	Brotherhood Church, Croydon	" 6	" "	Hyde Park
" 10	Mr. R. S. Wood	" "	" 7	" "	Stansfeld's Brewery, Fulham
" 11	Mr. A. Westcott	Pimlico and West Central District	" 8	" "	Battersea, Nine Elms
" 11	" "	Hyde Park	" 9	" "	Hyde Park
" 11	Mr. R. S. Wood	" "	" 9	" "	Price's Factory, Battersea
" 14	Mr. A. Westcott	Southport	" 10	" "	" "
" 15	" "	St. Helen's	" 11	Mr. R. S. Wood	Hyde Park
" 16	" "	Pimlico Pier and Chelsea Embankment	" 11	Mr. A. Westcott	Regent's Park
" 17	" "	" "	" 12	" "	Morgan's Crucible Works
" 18	" "	Hyde Park	" 13	" "	Price's Factory, Battersea
" 19	" "	" "	" 14	" "	Grove School, Battersea
" 20	" "	Baptist Chapel, Kingsgate Street, Holborn	" 14	" "	Simpson's Engineering Works
" 21	" "	" "	" 15	" "	Battersea, Nine Elms Lane
" 21	Mr. R. S. Wood	St. Mary's Club, Somers Town	" 16	" "	World's End, Chelsea
" 22	Mr. A. Westcott	Hyde Park	" 16	" "	" "
" 23	" "	Battersea	" 17	" "	Chelsea
" 24	" "	" "	" 17	Mr. R. S. Wood	Chelsea
" 26	" "	Hyde Park	" 17	Mr. A. Westcott	Hyde Park
" 28	" "	" "	" 17	Mr. R. S. Wood	" "
" 29	" "	" "	" 19	Mr. A. Westcott	Regent's Park
" 30	Mr. R. S. Wood	Hyde Park	" 19	Mr. R. S. Wood	Bracknell, Berks
" 30	Mr. A. Westcott	" "	" 21	" "	" "
" 31	" "	Regent's Park	" 21	Mr. A. Westcott	Chelsea, Pimlico, etc.
" 31	" "	Battersea Park	" 22	" "	" "
" 31	Mr. R. S. Wood	" "	" 23	" "	" "
June 1	Mr. A. Westcott	" "	" 23	Mr. R. S. Wood	Simpson's Engineering Works
" 1	Mr. R. S. Wood	" "	" 24	Mr. A. Westcott	Hyde Park
" 2	Mr. A. Westcott	Hyde Park	" 24	" "	Pimlico Pier
" 3	" "	" "	" 26	" "	Hyde Park
" 4	" "	" "	" 27	" "	" "
" 5	" "	Clerkenwell Green	" 28	" "	Chelsea
" 5	" "	Hyde Park	" 29	" "	" "
" 6	Mr. R. S. Wood	" "	" 30	" "	" "
" 7	Mr. A. Westcott	Regent's Park	" 31	" "	" "
" 8	" "	Price's Candle Factory	Aug. 1	" "	Chelsea
" 8	" "	Hyde Park	" 1	" "	Hyde Park
" 9	" "	Grosvenor Road, Pimlico	" 2	" "	Pimlico Pier
" 10	" "	Westbourne Park Chapel	" 2	" "	Battersea Park
" 11	" "	Nine Elms Lane	" 4	" "	Chelsea
" 11	" "	" "	" 4	" "	Hyde Park
" 12	" "	Hyde Park	" 4	Mr. R. S. Wood	" "
" 12	Mr. R. S. Wood	" "	" 6	Mr. A. Westcott	Chelsea
" 13	Mr. A. Westcott	Hyde Park	" 6	" "	Hyde Park
" 14	Mr. R. S. Wood	Regent's Park	" 7	" "	Chelsea
" 14	Mr. A. Westcott	" "	" 7	Mr. R. S. Wood	" "
" 15	" "	Hyde Park	" 8	Mr. A. Westcott	" "
" 16	" "	" "	to 14	" "	Hyde Park
" 17	" "	Grosvenor Road	" 14	Mr. R. S. Wood	" "
" 18	" "	Battersea and Hyde Park	" 15	Mr. A. Westcott	Regent's Park
" 19	" "	Nine Elms Lane	" 16	Mr. R. S. Wood	" "
" 20	Mr. R. S. Wood	New Malden	" 26	Mr. A. Westcott	Hyde Park
			to 28	" "	" "
			" 28	Mr. R. S. Wood	Hyde Park

DATE.	SPEAKERS.	PLACE OF MEETING.	DATE.	SPEAKERS.	PLACE OF MEETING.
1896.			1896.		
Aug. 29	Mr. A. Westcott	Hyde Park	Nov. 3	Mr. A. Westcott	Social Democratic Federation, Bermondsey
" 30	" "	Liberal Club, North Brixton	" 4	" "	Co-operative Society, Grays
" 30	" "	Hyde Park	" 4	Mr. R. S. Wood	Radical Club, N.E. Bethnal Green
" 30	Mr. R. S. Wood	Regent's Park	" 5	Mr. A. Westcott	Ideal Club, Tottenham Court Road
" 31	Mr. A. Westcott	Hyde Park	" 8	Mrs. Chas. Mallet	Liberal Club, N. Camberwell
Sept. 1	" "	"	" 8	Mr. A. Westcott	Unity Church, Islington
" 3	" "	"	" 8	" "	Labour League, Poplar
" 4	" "	Hyde Park	" 8	" "	Radical Club, Paddington
" 4	Mr. R. S. Wood	"	" 9	" "	"
" 5	Mr. A. Westcott	"	" 11	" "	Reform Club, Newington
" 6	" "	"	" 11	Mr. R. S. Wood	"
" 6	Mr. R. S. Wood	Mile End	" 12	Miss Alison Garland	Ward's Studios, Belgravia
" 7	Mr. A. Westcott	Hyde Park	" 12	Mr. A. Westcott	Labour League, Lambeth
" 8	" "	"	" 13	Mr. R. S. Wood	Wimbledon
" 9	" "	"	" 13	Dr. Berdoe	"
" 9	Mr. R. S. Wood	Mile End	" 13	Mrs. Chas. Mallet	Women's Progressive Union, Mowbray House
" 11	" "	"	" 15	Mr. A. Westcott	Radical Club, Boro' of Bethnal Green
" 11	Mr. A. Westcott	Hyde Park	" 15	" "	Social Democratic Federation, Kensal Town
" 12	" "	"	" 16	" "	Patriotic Club, Clerkenwell
" 13	" "	"	" 17	" "	Social Club, Bermondsey
" 13	Mr. R. S. Wood	Regent's Park	" 18	" "	Christ Church Club, Regent's Park
" 14	Mr. A. Westcott	Hyde Park	" 18	Dr. Berdoe	South Place, Finsbury
" 15	" "	"	" 19	Mr. A. Westcott	Christ Church Schools, I. of Dogs
" 16	" "	"	" 22	" "	Folks' Hall, Dalston Lane
" 16	Mr. R. S. Wood	Mile End	" 23	" "	Jewish Club, Bell Lane, E.
" 17	Mr. A. Westcott	Hyde Park	" 24	" "	Independent Labour Party, Marylebone
" 18	Mr. R. S. Wood	"	" 25	" "	Liberal Club, Dartford
" 23	Mr. A. Westcott	Harrow-on-the-Hill	" 25	Miss Alison Garland	Prestwich
" 24	Mrs. Chas. Mallet	Peckham Rye	" 25	Mrs. Chas. Mallet	Higher Broughton, Manchester
" 27	Mr. A. Westcott	Mile End	" 25	Dr. Berdoe	Christ Church Men's Club, Clifton
" 29	Mrs. Chas. Mallet	King's Heath, Birmingham	" 26	Mr. A. Westcott	Social Democratic Federation, Lambeth
" 30	Mr. A. Westcott	Mile End	" 28	" "	People's Hall, Penge
" 30	Mr. T. A. Williams	Leeds	" 28	Mr. R. S. Wood	Radical Club, Central Finsbury
Oct. 1	Mr. A. Westcott	Battersea	" 29	Mr. A. Westcott	Labour League, Poplar
& 2	" "	"	" 29	" "	Radical Club, Boro' of Bethnal Green
Oct. 1 to 14	Mr. T. A. Williams	Hull	" 1	" "	Progressive Club, N. Camberwell
" 5	Mr. A. Westcott	Patriotic Club, Clerkenwell	" 3	" "	Holy Trinity Church, Hoxton
" 7	" "	Progressive Club, Camberwell	" 3	Mr. Benj. Bryan	Berners Street, Oxford Street
" 9	" "	"	" 6	Mr. A. Westcott	Radical Club, N.E. Bethnal Green
" 9	Mr. R. S. Wood	Grove Schools, Battersea	" 6	" "	Working Men's Club, Chiswick
" 12	Mr. A. Westcott	Liberal Club, Enfield	" 6	" "	Independent Labour Party, N. Paddington
" 14	" "	Co-operative Society, Grays	" 7	" "	Liberal Club, Woolwich
Oct. 15 to 6	Mr. T. A. Williams	Derby	" 8	" "	Protest Room, Notting Hill
Oct. 18	Mr. A. Westcott	Progressive Club, I. of Dogs	" 9	" "	Gladstone Club, Hackney
" 21	" "	Radical Club, Mildmay Park	" 10	" "	Tee-To-Tum Club, Shoreditch
" 22	" "	"	" 10	Mrs. Chas. Mallet	Buxton
" 22	Mr. R. S. Wood	Tee-To-Tum Club, Shoreditch	" 13	Mr. A. Westcott	Progressive Club, Isle of Dogs
" 25	" "	Socialist Club, Battersea	" 13	" "	Independent Labour Party, Hampstead
" 25	Mr. A. Westcott	Reform Club, Newington	" 14	" "	Gladstone Club, N. Brixton
" 25	" "	Sydney Hall, Battersea	" 17	Lord Coleridge, Q.C.	"
" 26	" "	Liberal Club, Enfield	" 17	Mr. H. Sedgwick	Town Hall, Kensington
" 27	" "	Socialist Club, Bermondsey	" 17	Wilde	"
" 28	" "	Protestant Mission Church, Queen's Road	" 17	Mr. R. S. Wood	Peckham
" 28	Mr. R. S. Wood	"	" 17	Mr. Benj. Bryan	Literary Society, Saltash
" 29	Miss Alison Garland	Long Sutton, Cheddar, Somerton & Bridgwater	" 18	Mr. A. Westcott	Liberal Club, Dartford
Nov. 6	" "	"	" 18	Miss Alison Garland	Mansfield House, Canning Town
Oct. 30	Mrs. Chas. Mallet	Reading	" 20	Mr. A. Westcott	St. George's Catholic Club, Southwark
" 30	Rev. T. Perkins	"	" 20	" "	Tobacco Workers' Club
Nov. 1	Mr. A. Westcott	Working Men's Club, Cheswick	" 21	" "	"
" 1	" "	National Secular Society, Camberwell	" 21	Mr. R. S. Wood	"
" 1	Mr. R. S. Wood	"	" 22	Mr. A. Westcott	"
" 2	Rev. T. Perkins	Shaftesbury			
" 2	Mr. A. Westcott	Emmanuel Institute, Paddington			

CONTRIBUTIONS TO THE SPECIAL LECTURE FUND, 1896.

	£	s.	d.		£	s.	d.
A Friend (York), (third year)	3	3	0	King, Miss Catherine (second year)	0	10	0
A Friend, per Miss Chapman	0	10	0	Lorraine, Mrs. and Miss (second year)	0	15	0
Alleyne, Miss	0	5	0	Markham, Mrs.	0	10	0
Backhouse, Miss (third year)	10	0	0	Marsh, T. W., Esq.	0	10	0
Barbeau, Miss C. and Friend	0	3	0	M'Donogh, Mrs.	1	1	0
Beeching, Miss	3	0	0	Metz, Mr. Von, per Mrs. Gurney Turner	0	2	6
Bell, Ernest, Esq. (third year)	25	0	0	Morant, Miss	1	0	0
Blackett, Miss (second year)	1	0	0	Morrison, Frank, Esq., and } (third year)	100	0	0
Bostock, Miss	0	10	0	Morrison, Mrs.			
Brind, Miss A. M., per Mrs. Gurney Turner (third year)	0	5	0	Mosley, Miss M.	0	2	6
Burnham, Miss (third year)	1	0	0	Oates, C. G., Esq. (second year)	1	0	0
Caroline, Sister	3	3	0	Oppler, Mrs.	0	10	0
Carter, Miss, per Mrs. Gurney Turner (second year)	0	5	0	Paisley, Mrs. (1897), (fourth year)	10	0	0
Champney, Mrs.	1	0	0	Pearson, Miss, per Mrs. Gurney Turner (second year)	0	2	6
Chapman, Miss M. (third year)	2	0	0	Perkins, Mrs.	0	5	0
Cobb, Miss S. M.	0	5	0	Philips, Herbert, Esq. (third year)	25	0	0
Cobbe, Miss Frances Power (third year)	25	0	0	Phillips, Mrs.	2	2	0
Cox, Miss	0	5	0	Pike, Mrs. Lawrence (third year)	5	0	0
Cuthbert, Mrs. J. R. (second year)	0	10	0	Rees, Miss (third year)	2	10	0
Cutler, Miss C.	0	10	0	Savile, Gordon M., Esq.	0	8	0
Davies, A. E., Esq. (second year)	1	0	0	Scott, Chas. Newton, Esq. (third year)	1	0	0
Davies, Mrs. (second year)	1	0	0	Smith, Miss J. and Sister (second year)	1	0	0
Davies, Miss, per Mrs. Walter	1	1	0	Starkey, Mrs., per Mrs. Gurney Turner	0	2	6
Deavin, Mrs.	0	3	6	Styles, Mrs., per Mrs. Gurney Turner (second year)	1	1	0
De Burgh, Hugh (third year)	0	5	0	Suckling, Mrs. (third year)	5	0	0
Drosier, Rev. Charles, per Mrs. Aug. Drake (second year)	1	10	0	Sugden, Benj., Esq. (third year)	4	0	0
"E. A." (third year)	5	0	0	Tacey, The Misses (third year)	2	0	0
Faith Hope, Miss (third year)	0	10	6	Taylor, C. J., Esq.	2	2	0
Fisher, Mrs. (third year)	0	5	0	Uniacke, Robie, Esq.	0	10	6
Gleig, Mr. and Mrs., per Mrs. Gurney Turner (second year)	1	0	0	Uniacke, Mrs.	0	10	6
Goring-Banks, H. Ayrton, Esq. (third year)	5	0	0	Walton, Mrs., per Mrs. Gurney Turner	0	5	0
Goring-Banks, Mrs. (third year)	5	0	0	Wentworth, Miss Vernon (third year)	50	0	0
Grosvenor, Miss	2	0	0	Weston, Miss M. B. (third year)	1	10	0
Gurney Turner, Mrs. (third year)	2	0	0	Wolfenden, The Misses (second year)	2	2	0
Collection	0	12	6	Woodrow, Mrs. Hy., per Mrs. Gurney Turner (second year)	0	5	0
Harris, Mrs. S.	1	0	0	Woolcott-Browne, Mrs. (third year)	10	0	0
Henniker, Hon. Mrs. Arthur (third year)	5	0	0	Working Men's Branch (Mr. Hemming)	0	1	0
Henvey, Mrs., per Mrs. Gurney Turner	0	2	6	————— (Mr. J. Horton)	0	1	0
Hermon, Mrs.	2	2	0	————— (Mrs. A. Houghton)	0	1	0
Hoare, Miss	0	6	0	————— (Mr. J. M. Lawrence)	0	1	1
Jackson, Miss M. E. (in memory of the late Miss Mary Jackson)	10	0	0	————— Bracknell (per Mrs. Bowles)	0	16	10
James, Mrs. E. M. (third year)	10	0	0	————— Bethnal Green and other places	0	6	2
————— (1897), (fourth year)	5	0	0	————— Isle of Dogs	0	11	3
Keeling, Miss Julia M.	2	2	0	————— Sheffield (per Mr. A. Reynolds)	0	17	0
Ker, Mrs. Murray (third year)	2	2	0	————— Southport Branch	2	16	4
				Wright, R. A. A., Esq. (second year)	3	0	0
				Yardley, Miss Dora (second year)	0	3	0

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVI. No. 12.]

LONDON, APRIL 1, 1897.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Lord Llangattock has just joined the Victoria Street Society as an important annual subscriber. It is proposed to elect his lordship a Vice-President.

OUR contemporary, the *Globe*, is probably second to none of the press organs for intelligence, and yet in its issue of the 26th ult., it printed this extraordinary statement:—

"According to Dr. Roux, of the Pasteur Institute, Paris, the microbe of the plague is easily killed by antiseptics and a temperature of 140 degrees Centigrade, which is considerably over that of boiling water."

What was meant by antiseptics was not explained; but suppose corrosive sublimate were indicated—and that is the favourite bacteriological antiseptic, at present, we understand—how would any plague-stricken patient fare who had either that or boiling water administered to him?

WE do not know what authority may have drafted the

first question put by Mr. Swift MacNeill in the House of Commons on the 12th of March, but we cannot help remarking that it was rather clumsily framed. Hence, the blunt reply of the Home Secretary was probably all that could have been expected. The second question was much more to the purpose and elicited some useful information. One of the "safeguards against the infliction of unnecessary pain," said the Home Secretary, is "the character of the persons to whom licenses are given." There was more in the answer, which may be read in full elsewhere in this issue. But this passage is the most important. It means as we have always said that once licensed and certificated the vivisector is very largely the sole judge of what amount of pain he will inflict, the animal being entirely at his mercy.

WE note with pleasure, from the report of the proceedings in the *Bromley Times* of March 5th, that at the annual meeting of the Phillips Memorial Homœopathic Hospital established in that neighbourhood, Mr. A. E. Beddow, a friend and supporter of our Cause, spoke out his objections to vivisection. We were not so pleased, however—very much the reverse, in fact—to notice that Dr. Madden, one of the medical officers of the institution, though not announcing himself a vivisectionist, lauded highly some of the results of experiments on animals. This is contrary to the usual practice of homœopathic practitioners, who commonly condemn vivisection altogether.

THE *Temperance Chronicle*, in its issue for the 16th of February, recorded without a word of disapproval a series of experiments "to illustrate Temperance and Intemperance." Its note on the subject ran as follows:—

"We learn that the American Physiological Society have tried some curious experiments as to the effects of intoxicating liquor upon kittens and puppies. Two pairs of kittens—destined to illustrate Temperance and Intemperance—were chosen, and two pairs of spaniel pups, the object being to ascertain the influence of alcohol, regularly taken, upon animal growth, character, activity, and ability. At the end of ten days, however, the 'alcoholic pair' of kittens 'contracted severe colds,' which rather complicated the experiment, but it was noted that they became very quiet, and neither played nor purred. They seem also to have found Dutch courage in the flowing bowl for they showed no fear of dogs. Somewhat similar effects were produced upon the two spaniels, and the intemperate pair proved arrant muffs at running after thrown balls."

Beyond the fact that the effect of alcohol on animals is not necessarily the same as that on human beings, we are at a loss to conceive why, unless it were known that intemperance had a deleterious influence on the "growth,

character, activity, and ability" of human beings, the *Temperance Chronicle* was established to oppose it.

WE learnt from the *Lancet* of February 27th, that "in the last five weeks of 1896 . . . there were no fewer than 1442 notified cases of diphtheria in the county of London, and these yielded a weekly average of 288," and further that "the deaths registered yielded a weekly average of 51, and presented a per case mortality of 17·8 per cent. of the notifications." But, in the first "four weeks of the present year, the registered deaths were 239 in number, and the case mortality as high as 26·1 per cent." We suppose we may take it for granted, as the medical profession now so largely resort to anti-toxin for diphtheria, that that decoction was used as a rule in these cases. If that be so, it is impossible to escape the conclusion that the patients would have been better without it, as according to Dr. Lennox Browne, the mortality in 1895, on 1347 cases of diphtheria in London treated without anti-toxin was as low as 13·4 per cent. As we have often said, anti-toxin is no boon after all; we now put it as worse than that—it is a delusion.

IT seems that London is not the only large city where diphtheria has increased the death-rate. On the 25th of February there was a meeting of medical men representing the profession in Birmingham, when it was stated that the cases there, which stood at 316 in 1894, rose to 640 in 1895, and 1100 in 1896. All this time the anti-toxin was at hand, but its use failed to stop the march of the malady, and a mortality of 21·4 per cent. resulted—that is the mean for the three years. Dr. Saundby, President of the Council of the British Medical Association, who was the chairman of the meeting, gave only a very guarded testimony in favour of anti-toxin. "He thought there could be no doubt that when used with due precaution it was not dangerous in practice, and that when employed early and in sufficient dose it diminished the mortality." Dr. Lennox Browne, as quoted above, shows that this is not the case, and seeing that there are so many doubts as to its being dangerous rather than beneficial, we are surprised at the tenacity with which it is held on to.

MR. J. S. HURNDALL, Member of the Royal College of Veterinary Surgeons of England, has just published a work entitled, "Veterinary Homœopathy," in which he says "There is no proof that the millions of animals which have been cruelly tortured and sacrificed to the whims of fanciful scientists have ever produced the slightest benefit to science, inasmuch as the results obtained from such experiments have never saved a single life." Mr. Hurndall mentions a very curious fact about horses; he tells us that he has never seen in the course of his experience a single case of disease of the ear in that quadruped.

DR. KANTHACK, the bacteriologist, reviewing Professor Crookshank's new edition of his "Text Book of Bacteriology," in *Nature*, complains that the work is exceedingly unsatisfactory, because of the space devoted to the microbes of animals, while the descriptions of those connected with the diseases of mankind are hurried over in a few lines. Dr. Kanthack says, "We cannot get away from cows, calves, fowls, and mice, while man is of quite secondary importance." Can it be true that the human race is thus neglected by the youngest of the sciences? We have been given to understand that our earthly

paradise will be next neighbour to an Institute of Preventive Medicine, but it seems that in some branches of medicine the endowments of research merely mean the research of endowment, and the bacteriologist is not the friend of humanity he would have us believe.

A WRITER in the *Catholic Times* (February 19th), describing a visit to the Diocesan Seminary of St. Paul in the Far West of America says:—

"I must not omit the laboratory. I have seen nothing equal to it. Here is a fine room, fitted up with every scientific requirement. . . . Here is an incubating oven for germ studies, and all the appliances are of the most improved kind. Dr. Shields, the inventor of the plethysmograph, was engaged in demonstrating the functions of the ganglionic nerve centres to a class of some thirty students on the day I made my visit."

The "plethysmograph," it will be remembered, was one of the pieces of apparatus employed in Dr. Roy's horrible series of experiments on the kidneys of dogs, rabbits, and cats in Dr. Michael Foster's laboratory at Cambridge. The study of experimental physiology seems the strangest of all training for the Christian priesthood. We note that special attention is paid to "plain chant" in the Seminary. What a strange discord, the psalms of David and the shrieks of the Laboratory.

IN the *Proceedings of the Royal Medical Chirurgical Society*, vol. ix., p. 63 *et seq.*, Dr. Leman Guthrie narrates the case of a patient in the Regent's Park Hospital for Epilepsy and Paralysis, who had suffered for twenty years with violent movements of the left arm and leg. It is well known that brain and nerve specialists claim to know the exact area of the brain responsible for such movements. Is it not set down and mapped out in the chronicles of the kings of the laboratories? And so there was a meeting of the chiefs of the localisation of brain functions tribes, and they decided that the patient's skull must be trephined. And it was so. A hole was bored in the man's skull so as to enable the operator to cut out "the arm centre of the right motor cortex." And when the brain was exposed electricity was applied to it in various parts till fits were produced. Again the electrodes were used and a similar effect was produced. Says Dr. Guthrie: "The opening was obviously too low down and was accordingly enlarged by trephine." Stimulation, we learn, produced not merely movements, but genuine attacks of epilepsy. Then a portion of the brain about an inch and a half in diameter was removed, and the man became paralysed and more fits followed.

DR. GUTHRIE adds that "the results of the operation are most disappointing. . . . The operation leaves us no wiser than we were before as to the site of the lesion. . . . Until this mode of testing was applied the patient had never had a fit in his life. . . . As soon as he had recovered from the grave symptoms which followed the operation, and which were doubtless produced by it, he had no more fits." The symptoms actually threatened the patient's life, and the movements the operation was intended to relieve were only temporarily arrested. The scientific results consist in the discovery that the brain is not so tolerant of surgical injury as is usually considered; indeed it is admitted that the dangers of the operation outweigh the possible advantages.

DR. W. H. THOMPSON contributes a paper to the *Journal*

of *Physiology* (Vol. xx. No. 6, p. 456 *et seq.*) on "Peptone and the Circulation." Dogs were "employed," and it is stated that they were anæsthetised, also that curare was administered in certain cases. We know what this means. The spinal cord and vagi nerves were divided and electricity was applied, while a solution of peptone was injected into the great vein of the leg. We know that no efficient anæsthesia could be maintained whilst curare was used, and there is no doubt whatever that the dogs suffered the cruellest tortures imaginable.

Dr. ROBERT HUTCHINSON has a paper in the same number of the above *Journal* on the thyroid gland. His experiments consisted in removing the gland from dogs under ether. He says "in a few cases acute symptoms were allowed to supervene, and then one tried whether the administration of the preparation under trial was capable of cutting them short." We thought all this had been settled long ago and that the successful treatment of myxœdema by thyroid extract was an accomplished fact. The animals suffered extremely. We are told of one "2 p.m. No longer able to stand owing to rigidity of limbs, spasm of jaws, marked dyspnœa;" of another "muscular tremors, difficulty of walking, respiration somewhat laboured, refuses food, powerful convulsions." Three weeks after the operation the dog was "emaciating very rapidly and cannot now swallow food." Another dog in addition to similar symptoms developed a large ulcer over the ribs. The experimenter says "The above research was carried out in the Physiological Laboratory University of Edinburgh, during the time that I had the pleasure of acting as Chemical Assistant to Professor Rutherford."

At the meeting of the Physiological Society held at St. Bartholomew's Hospital, October 17th, 1896, Dr. Pavy said "There is perhaps no subject in physiological science in connection with which so much error has been disseminated as in that bearing on the question of sugar in the animal system. The experimentalist is beset with fallacy in every direction. . . . Nothing can be more discordant than the material to be found in Physiological literature upon the point." Dr. Pavy goes on to speak of "an immense amount of error—error, even, touching the very foundation of the notions that have been held upon the general question of sugar in relation to the animal system." Fallacy and error are inseparable from physiological investigations and when they arise from the practice of cruelty tend to bring the study into contempt.

How very far from a science is medicine may be gathered from some remarks in the *Practitioner* for February, p. 204, on the treatment of gout. We are told that on the question of diet "there is no hard and fast rule. Each man must be a law unto himself, and we agree with Dr. Ewart in condemning alike the champions of a purely vegetarian and a purely animal diet." If the physiological laboratory cannot settle such a question as this what can it settle? Echo answers "What?"

ACCORDING to the *Times* of Monday, March 15th, the medical school of St. George's Hospital was *en fête* on the previous Saturday evening. The occasion was the opening of the new laboratory and operating theatre.

"A very interesting and varied programme was arranged for the entertainment of the visitors, who were specially attracted by the laboratories of bacteriology, where provision

is now made for teaching and investigation in this department of science. . . . St. George's Hospital medical school claims to have been the pioneer of the study of tropical medicine in this country, and it was therefore fitting that a demonstration of tropical micro-organisms should be made on this occasion. This was done by Dr. Patrick Manson and Dr. W. J. Fenton, who exhibited among other things specimens of the malaria organism, of the plague bacillus, and of the trypanosoma of the tsetse fly disease of Africa. Skiagrams were shown in the library by Mr. J. H. Montague, while in the physiological laboratories Dr. Buckmaster, assisted by other gentlemen, gave demonstrations of the behaviour of muscle under various conditions, of the action of the cardiac valves in the ox-heart (Gad's experiment), and of other physiological functions."

We trust that the "muscles" and the "ox-heart" in these demonstrations were those of recently killed animals; but even if they were, it is only too certain that these brand-new laboratories will soon be the scene of other experiments in which the vivisectors' licence with various certificates will be called into requisition.

THE treatment of all manner of diseases by their "anti"-serum is proceeding apace. Dr. Washbourn, Assistant Physician to Guy's Hospital, gives a graphic account of his achievements with "antipneumococcic serum" in the *British Medical Journal* of February 27th. According to this the business is not exactly pure holiday work for the animals concerned. Profuse thanks are returned to Dr. Ruffer for the gift of a pony to the Royal Society for the grant of funds for the research and to Dr. Bulloch for assisting in manipulations—and the pony? are any thanks returned to him? Well, no; for the ungrateful beast took into its head to die before a sufficient degree of immunity was reached. Therefore no thanks to the pony.

"The pony was first injected with broth cultivations of the pneumococcus which had been heated to 60° C. for one hour, and subsequently with living cultivations. In October, after being under treatment (!) for nine months, it was suddenly seized with intestinal obstruction, and died after a few days' illness. This was especially unfortunate, as a fairly high degree of immunity had been attained, and the blood already possessed some protective power.

HOWEVER, another pony was procured, and we have in detail an account of the "treatment" this unfortunate animal underwent from November, 1895, to the following August. Here are a few items from the diary:—

The immunisation of a second pony was commenced in November, 1895. The pony was first injected with broth cultivations heated to 60° C. for one hour, then with living agar cultivations, and lastly with living broth cultivations. The injections were made into the subcutaneous tissues of the shoulder.

November 21st, 1895; 70 c.cm. broth cultivation heated to 60° C. for one hour. The temperature rose next morning to 103.5°, but soon subsided.

January 4th, 1896; 6 living agar cultivations. A swelling appeared at the spot of injection and lasted five days.

January 21st; 82 c.cm. living broth cultivation. A large swelling appeared at the spot of inoculation, and lasted nine days.

February 21st; 100 c.cm. living broth cultivation injected into both sides of the neck. A swelling appeared on both sides, more marked on right side. This subsided in a few days. The temperature reached 103° F.

March 3rd; 112 c.cm. living broth cultivation injected into both sides of neck. The animal appeared ill for twenty-four hours, and there was some swelling at the spot of injection.

March 27th; 200 c.cm. broth cultivation injected into both

sides of the neck. Marked swelling occurred on both sides, and lasted two days.

On April 3rd the near fore leg became hot, swollen, and tender, and in a few days an abscess formed and burst. The pus contained streptococci. Probably the infection was caused by a slight grazing of the skin against the wall of the stable. The animal became very ill, and we thought it would die. Owing to the unremitting attention of Dr. Bulloch, the abscess gradually healed, and in three weeks the animal was convalescent.

ON August 25th the bleeding began and then came the turn of the rabbits to assist in the experiment. Why the bleeding was not commenced before is explained thus:—

"The bleeding was deferred so long partly on account of the inflammation in the leg and partly from an experience gained during the immunisation of the first pony. After the injection of 100 c.cm. of a living broth cultivation, an abscess formed at the spot of inoculation, which only healed after three weeks. A week later, that is to say a month after the inoculation, blood was removed, and some of the serum was injected into the peritoneal cavity of a rabbit. The animal died of pneumococcal infection, showing that the serum contained living pneumococci. A fortnight later more blood was removed, and the serum injected into the peritoneal cavity of a rabbit. No ill effects ensued, so that by this time the cocci had disappeared from the blood."

A large number of rabbits were inoculated with various strengths of poison, killing them, with all the symptoms of general blood-poisoning, in about thirty-six hours. Others inoculated with virus and serum together survived. Rabbits inoculated with the virus, and after some hours later with serum, had their sufferings prolonged to a lengthened period, and some of them survived.

AFTER this, to make the case complete, there only remained to experiment on hospital patients. This was done on two men in Guy's Hospital suffering from pneumonia. Both recovered, but what share in the recovery the serum exercised the experimenters are unable to say. This much, however, they are sure about: "In both cases an urticarial rash was observed during convalescence," proving that blood-poisoning had occurred.

As in the case of rabies so is it with cattle-plague: no specific microbe is forthcoming as yet. This is very disappointing to Dr. Koch, who is now busy investigating rinderpest at the Cape, but it must be a deep consolation to him that he has proved that the microbe discovered by Dr. Edington is not the genuine article. It would have been quite too mortifying to have travelled all that way only to find himself forestalled by a local practitioner. The negative proof was obtained in this way (*British Medical Journal*, March 6th); Animals inoculated with the Edington virus not only do not take rinderpest as a result, but when, later on, they were inoculated with blood from infected animals they did take it and died of it.

An interesting discovery by Dr. Koch is that of a difference between sheep and goats. Neither sheep nor goats die of rinderpest—it is a bovine disease more especially—but Cape sheep have the faculty of intensifying the virus when it is passed through several generations of them, whilst with goats it is different; when passing through them the virus loses some of its virtues—or vices. This reminds us again of the rabies experiments

of Pasteur, some animals intensified and some diminished the forces of the rabic virus, but never one of them revealed the secret of the virus in the shape of a specific microbe.

Dr. Koch's next discovery was the finding of scientific language in which to express a fact well-known to the cattle men of the Cape. In their expressive language an animal which has had rinderpest and survived is "salted," that is, preserved from the risks of a second attack. This, of course, was "not knowledge" until Dr. Koch had injected unlimited pest blood into them. Having done that he is now satisfied that one attack protects from another like scarlatina. The next step was, of course, to bleed the "salted" kine and separate the serum, mix the serum with rinderpest blood and inject it into more animals in order to show that it has "anti" properties. Of course it has; and we hope the cattle owners are satisfied now that a series of experiments have been performed which deeply interest the *British Medical Journal*. Whether they are likely to be of any practical use is an inferior order of question which we suppose the Cape Government will be too scientific to care about. Anyway this pronouncement from the *British Medical Journal* ought to console them:—

"This is a most interesting phase of the serum treatment question, and there can be little doubt that if Koch can only determine the nature of the virus, he may be able to throw considerable light on the nature and treatment of some of the specific infective diseases in the human subject, in which as yet we have not been able to detect the primary causal agent."

Obituary.

MRS. LORAINÉ.

THE demise of Mrs. Henrietta Maria Lorainé, of Torquay, which took place on Wednesday, the 24th of February, is a source of real sorrow to our friends in that town, as well as to ourselves, and at the same time a serious loss to our Cause in the famous South Devon watering-place, where, for the past ten years she had acted as hon. secretary of the local branch of the Society. The late Mrs. Lorainé was esteemed in Torquay for making herself useful in many ways, and in regard to our own work she had done much to sustain and promote it for a very long period. She experienced frequent spells of ill-health, but her interest in and desire to advance the Anti-Vivisection Cause never flagged, and whenever able she was always doing her best for it. Prior to her death she had arranged and fixed the annual meeting of the Torquay Branch and issued her report. She will be much missed locally, and the regret of the Torquay Committee on her death is profound. The Victoria Street Committee also deeply deplore her loss, and when the news was officially reported to them passed a resolution of condolence and regret.

* * In reference to the cause of the death of Mrs. Massingberd, reported last month, we are requested to state that the demise was actually due to cancer of the liver, and was not owing to the operation she had undergone in any way. This, at her own express wish, was clearly ascertained by the doctors after death.

FORTHCOMING DEBATE.—There is to be a debate at South Place Chapel, Finsbury, on "The Ethical Position of Vivisection," on Sunday, 9th May, when there will be speakers on both sides of the question.

MEETINGS.

PUBLIC MEETING AT GLOUCESTER.

A well attended public meeting, to protest against the practice of vivisection, was held in the Corn Exchange, Gloucester, on Monday night, March 1st. The chair was taken by Mr. John W. Probyn, who was supported on the platform by the Rev. T. Perkins, M.A., F.R.A.S., rector of Turnworth, the Rev. T. Broughton Knight, Congregational minister of Wrington, Mr. Edward Haughton, B.A., M.D., Mr. J. G. Swift MacNeill, Q.C., and M.P. for South Donegal, Miss Wemyss, Mrs. Pollard (Cheltenham), and Mr. Platt.

The CHAIRMAN said if vivisection meant they were to take dumb animals and to force them to go through great torture, to strap them down, and to subject them to prolonged agony, he could not say that such a practice was at all justifiable, and he could not consent to it. (Hear, hear.) But then they came to the question of anæsthetics, which, he understood, rendered an animal more or less insensible to pain. If it could be shown that by the administration of anæsthetics all pain was completely removed, he was open-minded enough to admit that there was something to be said for that position. But supposing animals were to be rendered absolutely insensible to pain, he should like to know whether the experiments had a like effect, and the knowledge gained was the same, as would have been the case had the animals throughout been fully sentient. If that were not so, it was clear they could not have painless vivisection. (Hear, hear.)

DR. EDWARD HAUGHTON moved the first resolution: "That whereas the pursuit of the practice of vivisection inflicts a vast amount of suffering upon dumb animals, while the useful knowledge or benefit ensuing to the human race obtainable only by vivisection is very small in amount, this meeting condemns the system of experimenting on living animals, and considers that it is entirely unjustifiable." Dr. Haughton explained that although anæsthetics were administered to animals before they were operated upon it was nearly impossible to employ them so far as to render them insensible, and it had also to be remembered that in many instances where the experiment necessitated keeping the animal alive for a prolonged period, the administration of anæsthetics was out of the question. Further, the sufferings of the tortured animals were excruciating after the experiments. The chief drug used by vivisectionists was curare, which, far from diminishing sensibility, augmented it exceedingly. The truth was it was not the animals who were anæsthetised, but the British public. The reason that he took the position he did on the subject was, firstly, because vivisection was cruel, and, secondly, because he and many others held it to be misleading. Speaking of the growing popularity of bacteriology, and the practice of inoculation, the speaker said the art of medicine had degenerated into mere microbe catching, and the basis of the so-called preventive medicine was the system of keeping in good health by communicating almost all known diseases by inoculation. (Laughter.) Some ten millions of money had been spent among the people in plague-stricken Bombay in this way, which would have been more profitably spent in improving the shocking insanitary state of the province, anyone acquainted with which did not wonder at the outbreak of a plague. But doctors or scientists who were nobody at home had only to go abroad with some theory of inoculation, and they soon sprang into notoriety as famous bacteriologists. (Laughter.)

MR. MACNEILL, M.P., in supporting the resolution, said they were assembled to plead for the protection from outrage and wrong and terrible suffering of those inferior creatures to whom they were bound by so many ties of kindness and affection. Dr. Haughton had shown them that mankind as a whole was not benefited, nor was ever likely to be, by torturing dumb animals, but even if they were he should still be opposed to vivisection. (Hear, hear.) We were not to purchase immunity from suffering for ourselves when that immunity was purchased by the torture of sensitive beings. (Hear, hear.) Such a practice was contrary alike to the principle of humanity and Christianity, and it was a cowardly and contemptible act to seek to alleviate one's own pain by

inflicting agony upon an animal. (Hear, hear.) In conclusion Mr. MacNeill gave some hints as to how the cause of anti-vivisection could be advanced in other ways, such as refusing support to hospitals where vivisection was practised, or to patronise medical men who dissected living animals. Then they should take care that they did not send any of God's poor to a hospital where vivisection was practised, because there was only one step from vivisection to dissection.

In reply to a question as to how one could find out whether a hospital practised vivisection, the CHAIRMAN said every place where vivisection was allowed had to be licensed.

The resolution was carried unanimously.

The Rev. T. PERKINS next proposed "That as the practice of vivisection is subversive of the qualities of pity and compassion divinely implanted in the human heart, that, as it is equally opposed to the religion of mercy and the Gospel of Peace, and consequently to all moral considerations, this meeting decides that it ought to be prohibited and suppressed." The speaker, in addressing the meeting, based his remarks upon the sentiments of mercy and pity, and quoted extracts from familiar poets, whose spirit he would have them cultivate, showing the love and tenderness they had for dumb creatures.

The Rev. T. BROUGHTON KNIGHT seconded, and this resolution was also carried *nem. con.*

At the request of Miss Wemyss, Mr. E. Hoy, who said he had had 60 years' experience in the treatment of dogs, briefly addressed the meeting, stating that he always employed kindness in dealing with animals committed to his care; after which the proceedings terminated.

Sermons against cruelty to animals and especially vivisection were preached from five pulpits in Gloucester on February 28th, by the Rev. T. Perkins at the Crypt, the Cathedral, and All Saints; and at two of the largest Nonconformist Chapels by the Rev. Broughton Knight. All the sermons gave the utmost satisfaction.

ANNUAL MEETING OF THE MANCHESTER SOCIETY.

The annual gathering of the Manchester Anti-Vivisection Society was held on February 25th, in the Memorial Buildings, Albert Square, Manchester, Mr. Frank Spence presiding over a large attendance, and being supported by, amongst others, the Rev. John Baird, of Edinburgh (President of the Scottish Anti-Vivisection Society), Mr. Herbert Philips, J.P., Dr. F. S. Arnold, the Rev. D. T. Young, Mr. Stephen Massey, and Mr. Benjamin Sugden.

The Annual Report presented by the Committee, and read by Mr. HERBERT PHILIPS, stated that "during the past year the efforts of this Society have been directed as before, to the task of enlightening public opinion as to the evil practice of vivisection, or the torture of living animals for purposes of experiment. Not only has the extent to which these cruelties are carried on in this country—i.e., the ever-increasing number of laboratories, and not only number, but atrocity of the experiments—to be insisted on, but even the very existence of the practice. The secrecy observed with regard to the matter makes it difficult for those who are working for the cause to get credit for the truth of the facts they state, and in consequence to rouse any righteous indignation against the wrong. The Committee, however, have in no way relaxed their efforts. The work has to be carried on as before by lectures, by the distribution of literature, and, above all, by personal influence whenever opportunity occurs." After describing the work of the past year and referring to the meetings held and the literature distributed, the report mentioned that a special fund was being formed by some of the older friends of the Society to be held in trust in any way that may be desirable. In the first instance, however, it is intended to apply the income of the fund towards office expenses. Whilst this, the report added, is an encouragement to the Committee, it does not relieve them from the duty of appealing most urgently to the friends of animals in this district for further support in the way of annual subscriptions. The expenses incurred in publishing and circulating literature and in the promotion of public meetings are heavy, and the Society is sadly crippled for want of funds.

The CHAIRMAN, in moving the adoption of the report, called attention to the circumstances which brought about the agita-

tion against vivisection. They could not, he said, forget that the net outcome of the national indignation excited 20 years ago by the horrible experiments before the Medical Association, and which led to the Vivisection Act, was to license by law and thus to very greatly increase the practice of torturing dumb animals. All this, too, under the guise of a system of official inspection, which had proved itself what the enemies of the measure in Parliament designed it to be, "a sham, a delusion, and a snare." (Hear, hear.) The anti-vivisection societies were now, he understood, strenuously demanding that this farcical inspection should be made real by a system of surprise visits at any time during operations, by the appointment as the paid inspectors not of medical men, but of intelligent laymen, influenced by *esprit de corps*; and last, but not least, by the printing and publishing of the full text of their reports. The requirement of unbiassed inspection and publication of complete reports was, he thought, of the utmost practical importance to the success of the movement, for it was certain vivisection could not live if the public once realised the actual horrors that were being perpetrated in the name of a scientific method, which was disclaimed and repudiated as worse than useless by some of the ablest and most advanced members of the medical profession. It was gratifying to learn that public attention was being drawn by the societies to the recent infatuated proposal to found a Pasteur Institute in India. In view of the implicit belief in transmigration held by a vast section of our Indian populace, it was to be sincerely hoped that the Government would absolutely prohibit the establishment of an institute which would so grossly outrage the religious feelings of many of our Eastern fellow-subjects, and possibly sow the seeds of a second Indian Mutiny. Proceeding to deal with the difficulties which beset the path of the reformer, the Chairman said that if he were asked what practical course he would suggest for dealing with the present deadlock in legislation, he would reply the people were only waiting to be led, and their truest leaders were to be found in that section of the community which was freest from partisan motives, whose great aim in short was the glory of God and the good of man. (Hear, hear.) The establishment in every city of a local Christian union would, in a surprising way, supplement and follow up the beneficent work of the churches. Nothing could more powerfully impress men of the world, or induce them to support proposals of social and legislative reform manifestly prompted by the purest and most patriotic motives. (Applause.)

Mr. HERBERT PHILIPS read a letter he had received from Miss Frances Power Cobbe, the foundress of the movement, in which she announced that it was intended to hold a meeting in London to protest against the application of any portion of the Prince of Wales' Hospital Fund to any medical school licensed for vivisection. The appeal of the Prince of Wales to them to support a medical school where vivisection was practised was like inviting Sir Wilfrid Lawson to drink the Queen's health in a bumper and making him appear as a curmudgeon if he refused to do so.

The Rev. JOHN BAIRD, in seconding the adoption of the report, said it indicated no relaxation of effort but devotion and enthusiasm as heretofore. Surely, beneath that great and burning controversy, there must be essential soundness of principle, seeing the protracted existence of their societies, for had there been radical unsoundness in the anti-vivisection view those organizations must, by that time, have lapsed into decay and exhaustion. (Hear, hear.) But, instead of that, more than twenty years after the restrictive Act of 1876 was passed the voice of the opponents of the practice of vivisection was not diminished or modified but, rather, more persistent and clamorous than ever for the abolition of this form of cruelty. (Applause.) Their movement was not capable of extinction (applause), and, though at times they might be disposed to entertain feelings of depression, they had the conviction that interest in the question was deepening in the public mind. (Applause.) They were not dealing with a question of diminishing interest, but rather with one of constantly enlarging scope. They were not yielding in any way to the propagation of a mere fad (hear, hear), for the great faddists in the nation were those devoted to vivisection. (Hear, hear.) Vivisection was a fad, and, from a scientific point of view, was continually being demonstrated as radically

unsound. (Applause.) How scientific men, in whose case they assumed carefulness of calculation and maturity of intelligence, could, notwithstanding the disappointments and disasters of the past, still continue to adhere to the old positions and seek to impose on the public as they did, utterly baffled his comprehension. (Applause.) He thought they might congratulate themselves on the position their cause was occupying, for though, from some points of view, it would have been satisfactory had a complete abolition Act been passed in 1876, the restrictive Act, unsatisfactory though it was, had its compensations, for it had led to the organization of numerous societies, to a very careful historical and scientific investigation of the questions which had been raised, and had led to the diffusion of a vast amount of important and needful scientific knowledge. (Hear, hear.) Therefore the public were in a far more satisfactory position for deciding this question, alike from a scientific and a moral point of view, than they were in 1876. (Hear, hear.) The opponents of vivisection had not thwarted science but had contributed to it. (Hear, hear.) Let them review the previous year. There was nothing notable in the way of discovery. They had accustomed themselves to expect no end of claims, claims which were discredited before the lapse of many months or years; but 1896 came and went without any distinct claim being advanced on behalf of vivisection. Passing on to a reference to Lord Lister's speech in favour of vivisection at the last meeting of the British Association at Liverpool, the speaker said there was no doubt that the vivisection party had great expectations in connection with Lord Lister's influence in his new position; and no doubt they were congratulating themselves that raised as he had been to the peerage, they had thus some sort of guarantee that the "fallacy" institute, of which he was president, would receive a licence. It would remain with the Anti-vivisection party to thwart that expectation (applause). Some people said that the question was one for medical men alone, and why not defer to medical opinion? But, he asked, did history show that medical opinion was infallible? (Hear, hear, and applause.) The very use of the name *Lancet*, borne by the leading medical journal, indicated a method of practice which the medical profession had long since abandoned. (Laughter, and applause.) They, the Anti-vivisectionists, did not invite the public to espouse a fad, but to look at the whole controversy in the light of common sense and pass their verdict as to who was right and who was wrong. (Applause.)

Dr. F. S. ARNOLD proposed, Mr. HERBERT PHILIPS seconded, the Rev. D. T. YOUNG supported, and it was resolved:—"That this meeting hears with satisfaction of the strong and widespread opposition that is being made against the grant of a licence for vivisection to the new building on the Chelsea embankment, called 'The Institute of Preventive Medicine.'"

The Chairman was authorised to forward the resolution to the Home Secretary.

Mr. PHILIPS remarked that a better name for the new establishment would be "Institute for the artificial manufacture of disease in living animals, and for the sale of poisonous matter."

A vote of thanks to the Chairman and Mr. Baird was adopted on the motion of Mr. SUGDEN, seconded by Mr. STEPHEN MASSEY.

ANNUAL MEETING OF THE TORQUAY BRANCH.

The annual meeting of the Torquay branch of the Victoria Street Society was held on Tuesday, the 23rd inst., Mr. S. S. Boase, a member of the Executive, presiding. The attendance included Lady MacGregor, one of the Vice-presidents; the Rev. Thomas Perkins, M.A., F.R.A.S., Rector of Turnworth, Dorset; Mr. T. Viccars, the Rev. Priestley Prime, Mr. Algernon Taylor, Mr. W. W. Bromham, Mrs. Osborne (Hon. Sec.), and the Rev. Vernon Herford.

The report, the last prepared by the late Mrs. Loraine, for ten years Hon. Sec., was read by the Chairman. It called for more energetic efforts on the part of all humane persons to oppose in every possible manner vivisection, the most terrible of all cruelties, and appealed for assistance from all who could sympathise with the tortured victims of so-called science.

The accounts showed that £12 had been remitted to the Parent Society, and that £10 remained in hand.

The CHAIRMAN said they met amid rather gloomy and unfortunate surroundings. Owing to a somewhat serious accident Mr. Bryan was unable to be present, and, what was a still greater loss, Mrs. Loraine had passed away since their last meeting. Her death was a great loss, not only to the local society, but to the cause of animals throughout the country. None but those who were intimately concerned with the work could thoroughly realise how earnest she was, and with what untiring energy she fulfilled her duties. She undertook the hon. secretaryship in June, 1887, and it was not too much to say that in more than one crisis her unfailing trust and courage saved the branch from extinction. He suggested the raising of a memorial, and hoped it would take a wider phase than the limits of that society. They had been fortunate in so soon securing another hon. secretary in Mrs. Osborn, and hoped that she would become a permanent official. Mr. Boase defended the position of the Society in restricting its operations to vivisection, and dwelt at length upon the good work of Mr. Bryan and those who assisted him at headquarters. Some time during next century a work might be compiled to show the errors of the medical profession during the present century, and the compiler would find in the annals of Victoria Street a very comprehensive record of those errors. (Hear, hear).

The Rev. THOMAS PERKINS, whilst denying that any very great discoveries had been made by vivisection, based his principal objection to the practice on the moral ground. He said that the English physiologists compared unfavourably with their Continental brethren in the matter of honesty. The former, afraid of popular opinion, cloaked their experiments under the plea that they were beneficial to the human race. They had a hard battle to fight. The physiologists, as a body, were opposed to them, and so were the majority of the medical men, although many of them had no more actual knowledge of vivisection than those present at the meeting. They supported the practice, because they did not want to disassociate themselves from the "shining lights" of their profession. He protested against the establishment of the proposed Pasteur Institute at Chelsea, and expressed the opinion that Lord Salisbury would hardly dare grant the licence in face of the petition recently sent up against it.

The Rev. PRIESTLEY PRIME declared that the ordinary individual was competent to express an opinion based upon the broad lines of a question such as vivisection. It was not absolutely necessary to have technical knowledge. He opposed the practice on the twofold ground that it stood in the way of the advance of science, and the advance of the human race. By any standard of moral right vivisection must fall. Vivisectioners, he asserted, were the grossest materialists in the country.

In a very eloquent speech, Mr. T. VICCARS expressed the regret of the meeting at the absence of Mr. Bryan, and at the cause of that absence. He said that he loved physiology, but hated the very thought of torture, seeing that resort to it, besides inflicting suffering, blunted the best feelings of human nature. He would very much like to see one Sunday a year devoted to the claims of animals in all the churches. Vivisection seemed to him hellish. To gain knowledge at the expense of the soul's sensibilities was to make a false bargain. He would rather have a compassionate Buddhist than a Christian destitute of tenderness of heart.

Thanks to the Rev. T. Perkins and the Chairman concluded the meeting.

HOME INTELLIGENCE.

BRISTOL.

MERCY DEPARTMENT BRITISH WOMEN'S TEMPERANCE ASSOCIATION.

At the recent Annual Meeting of the British Congregational Council, consisting of Ministers, Deacons, and Delegates from each Church, Miss E. Evans gave a short address on the claims of animals, entitled "A plea for the weak." She stated her plea was not on behalf of the weaker sex, who happily could speak for themselves; but for the voiceless

and voteless "members of creation" whose needs appealed to man's chivalry. "Open thy mouth for the dumb" was a scriptural injunction, but how few obeyed it. The Psalmist said that God's "tender mercies are over all His Works," and yet many Christians acted as if that meant only human beings. Several passages were quoted showing God's care for animals, and that as our only hope of a better world was through the mercy of God, we ought to be careful to show mercy to others, remembering above all Who had said "Blessed are the merciful." Everyone ought to speak out against Vivisection; no amount of supposed benefit to humanity could ever justify the infliction of torture. The rights of animals ought to be respected, and not trampled on. She concluded by urging that definite teaching of our duty to animals should be given in all places of worship, and Sabbath schools, etc.

ST. ALBANS.

On March 9th, Mr. J. Fraser, F.R.C.V.S., delivered a lecture on Vivisection in reply to the address recently delivered by Dr. Berdoe. The chair was taken by Dr. J. Morison, and the meeting, which was but sparsely attended, was honoured by the presence of the Mayor and several clergymen and ministers. Dr. Berdoe was present on behalf of the Victoria Street Society. Mr. Fraser, who judiciously abstained from any attempt to reply to Dr. Berdoe's charge that Vivisection is founded in cruelty and sustained by falsehood, adduced a number of instances in which he maintained that Vivisection had been of supreme importance to medicine. Pasteurism was one unfortunate example, and Listerism of the exploded spray and carbolic period another. He accused Dr. Berdoe of ignorance in maintaining that Asepsis is more efficacious than Antisepsis, evincing thereby his own ignorance of the facts that Lord Lister has openly confessed his conversion to the former position. Mr. Fraser had such difficulty in repelling Dr. Berdoe's vigorous charges, that he took refuge in forcible if not very courteous denials of well known facts, such as the danger of administering chloroform to dogs and the different action of drugs on animals and man. A medical antagonist should be opposed by a medical man; a veterinary practitioner, however competent to speak of the diseases and treatment of animals, has no authority to deal with purely medical questions. By adroit evasion of difficulties, and an *ad captandum* way of making the most of certain aspects of the tuberculosis and glanders tests, Mr. Fraser did the best he could for a bad cause.

A discussion followed in which Dr. Berdoe took part, and ably exposed the shallow nature of the lecturer's claims on behalf of Vivisection. Mr. T. A. Williams, Rev. H. W. Taylor and others also spoke.

WITHOUT being unnecessarily vindictive, I confess I cannot avoid a certain amount of pleasure in reading of the death, "after terrible sufferings," of Dr. Comtegean, attached to the Pasteur Institute at Belgrade. Six days ago this gentleman swallowed a packet of corrosive sublimate, mistaking it in the dark for bicarbonate of soda. These vivisectionists, shrinking at the faintest suggestion of pain to themselves, are always so very eloquent in advocating its infliction upon helpless animals, that one cannot help feeling that, in this instance, something in the nature of grim justice has been accomplished. I should like to see it stipulated that every scientific man, before devoting his life to the torture of other creatures, should be compelled to undergo half an hour's agony on his own account. I am fancying that, if this were the rule, the ranks of the vivisectionists would be somewhat thinned, and we should hear less eloquent diatribes upon the necessity of science.—*Tu-Day*, March 6th.

NEW BOOKS, REPORTS, ETC.

Received:—*Disorders Mistaken for Hydrophobia*, by Charles W. Dulles, M.D., Fell. Coll. Phys. & Acad. of Surg., Philadelphia; *Hydrophobia in the United States, with Suggestions as to Treatment*, by the same; *The Homeopathic World*, March (Homeopathic Publishing Co., 12, Warwick Lane); *Report of La Ligue et Confraternité des Amis des Animaux at Monaco* (Mrs. Adlam, Hon. Sec.); *The New England Anti-Vivisection Society Monthly*, vol. 2, No. 3.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, THURSDAY, APRIL 1st, 1897.

THE PRINCE OF WALES'S FUND AND HOSPITAL REFORM.

PROBABLY the last thing expected by the originators of the PRINCE OF WALES'S scheme for hospital endowment was the bringing to the front of the whole question of hospital management and hospital reform. This, however, is likely to be one of its leading results; and there are hospital reformers of various kinds. Within the medical profession hospital reform means one thing; hospital administrators like Mr. BURDETT have quite another thing in their minds; and humanitarians, like the members of our own and kindred societies, look on the question from yet another point of view.

The main issues involved in all three sets of reforms are brought out in an article which the *British Medical Journal*, of March 6th, devotes to the discussion of a letter addressed to that journal by the Editor of *Church Bells*. This letter the *Journal* excuses itself from printing on the score of its length, but it admits the friendliness of its tone, and endeavours to give its gist. The first point dealt with is that of extravagance in hospital management. The truth of this charge is admitted in respect to some institutions, but it is denied as being true generally. The next charge brought against hospitals is one of neglect, and a demand for guarantees of "better and more humane treatment" of patients generally, and especially of out-patients. This charge is denied except in isolated instances, which the *Journal* professes to be very anxious to see brought home to the individuals concerned. The innocent Editor of the *British Medical Journal* has evidently never heard of *esprit de corps*, and has no idea of the difficulty of fixing such a charge, even when the facts are as patent as may be. The affair of the Chelsea Hospital for Women is a case in point. That something was wrong was plain enough; but that it was impossible to adequately apportion the blame was equally evident from the sequel. Again, the memory of the Editor of the *Journal* must be able to carry him back to the famous nitrite of sodium experiments of Drs. RINGER and MURRELL. These were as glaring an abuse of the treatment of out-patients as it

would be possible to give, and yet the Editor of the *Journal* instead of stigmatising them as they deserved, defended the experimenters, and thereby lost all chance of a seat in Parliament which he happened to be contesting about that time. But though the *Journal* sees no need for reform in this respect, it does in another: "the reforms which we admit we require in the out-patient system are mainly directed to limit the indiscriminate admission of patients, and to check an unrestricted and unthinking benevolence." The *Journal*, naturally enough, takes the medical trades' union point of view in the reforms it is seeking.

The third point urged by the editor of *Church Bells* is the one which appeals to ourselves. "There is," says this writer, "an uneasy feeling that a far larger encouragement is accorded by some hospitals to the increase of vivisection than is warranted." "This," says the editor of the *British Medical Journal*, "is utterly ridiculous," and he says further that there is no connection whatever between these licences to perform experiments on living animals and our hospitals; that the vivisection is carried on quite apart from the hospitals; that hospital physicians and surgeons rarely perform it, and, finally, if they do vivisection in addition to their other professional functions "all honour to them!"—as it constitutes part of the "magnificent work done every year by the medical men of England both in and out of hospitals."

Here we should like to ask the *Journal* why, if it is so proud of the work of its vivisectioners, it should be so nervously anxious to deny that any vivisection is done in connection with hospitals?

But before we reply to these optimistic statements we will reproduce two letters addressed by the Hon. Treasurer of our Society to His Royal Highness the PRINCE OF WALES, and the Prince's reply to the former:—

I.

20, Victoria Street, S.W.

24th of February, 1897.

To His Royal Highness the Prince of Wales, K.G.

SIR,

As Honorary Treasurer of the chief Society in England that has for its object the prevention of the torture of animals under the cloak of Science, the duty has been laid upon me of humbly approaching your Royal Highness in the matter of the Hospital Fund now being raised to commemorate the prolonged and beneficent reign of Her Majesty the Queen.

None of those whom I have the honour to represent entertain any but the deepest feelings of commiseration for our suffering fellow creatures in the many hospitals of this country, but our sympathies extend yet further—even to the hapless dumb animals that daily and hourly are slowly cut up alive without even the pretence of anæsthetics in many of the laboratories that are attached to these hospitals.

To give money to hospitals is one act; to subscribe towards the vivisection of animals is another act; and my Society respectfully would ask whether your Royal Highness intends so to direct the distribution of this Fund as to preclude the possibility of any of it reaching such hospitals as maintain medical schools, where vivisection is practised, as part of their establishments.

It would seem to those for whom I speak that unless your Royal Highness directs that the hospitals with vivisectional laboratories attached to them shall not participate in the distribution of this Fund, it may come to pass—nay, almost certainly it must come to pass—that money subscribed in honour of the Queen and in charity to the suffering may in part at least be devoted to maintaining the torture of animals.

Sir, we do not presume to inquire what may be your opinion upon the practice of vivisection, but in duty to the great Cause we have at heart we are constrained in all humility to importune your Royal Highness to give definite expression to your gracious intentions in this important matter.

I beg leave to subscribe myself your Royal Highness's most obedient humble servant,

STEPHEN COLERIDGE.

Marlborough House,
27th February, 1897.

To The Honble. Stephen Coleridge.

DEAR SIR,

I am desired by the Prince of Wales to acknowledge the receipt of your letter of the 25th inst.

His Royal Highness directs me in reply to remind you that the main principle of his scheme is the collection of funds for the purpose of affording relief to the suffering, and to inform you that under these circumstances it would not, he thinks, be advisable for him to enter into any collateral considerations.

I remain, yours truly,
FRANCIS KNOLLYS.

II.

20, Victoria Street, S.W.
3rd of March, 1897.

DEAR SIR,

At their meeting this afternoon the Committee of the Victoria Street Society for the Prevention of Vivisection considered the reply which the Prince of Wales was so good as to desire you to make to my letter of the 24th of February.

While noting that His Royal Highness now regards the question whether any of the Queen's Commemoration Fund would go to support vivisection as a collateral consideration, entrance upon which he deprecates, the Committee cannot but remember that His Royal Highness himself makes allusion to the hospitals in his appeal as being not only institutions for the relief of suffering, but places affording "a means of medical education and the advancement of medical science."

With this view of the function of hospitals we beg leave respectfully to concur.

But the Society is aware that the value of hospitals as schools of medical training is believed by many, as it thinks erroneously, to depend largely on the practice of vivisection, and it fears that the words used by His Royal Highness may be supposed to imply that support will be given to that practice to which the Society feels bound to offer a steadfast opposition.

In these circumstances, while disclaiming any but the most respectful sentiments towards His Royal Highness, the Society feels that it would be unfaithful to the cause for which it exists were it not, with a due sense of the grave responsibility which rests upon it, to make its solemn protest against any of the Fund collected for the relief of suffering humanity being devoted to maintaining the torture of animals.

I have the honour to remain,

Very truly yours,

STEPHEN COLERIDGE.

Sir Francis Knollys, K.C.M.G.

Both the *Lancet* and the *British Medical Journal* are horrified by that paragraph in Mr. COLERIDGE's letter in which he states that in the laboratories attached to many hospitals in this country "animals are daily and hourly cut up alive without even the pretence of anæsthetics." The *Lancet* maintains that such proceedings are wholly illegal; in saying which it betrays either invincible or unpardonable ignorance. Under a licence and certificate a vivisector may do all this with no one to say a word against him. It loftily demands that the Society shall prosecute licensed vivisectors for doing such things. But this is preposterous—seeing that they are authorised by law. Even when vivisectors are caught performing experiments without proper licences and certificates, if the Home Secretary does not defend the delinquents and keep their names secret, it is found, as in the Ferrier case, that *esprit de corps* is strong enough to make men, who have written one thing in the journals, deny it flatly before a magistrate.

The only possible means we have of judging is from the reports of their experiments by the Vivisectors themselves, and the annual Returns of the Inspectors; and these, imperfect as they are, are amply sufficient to justify Mr. COLERIDGE's letter. Taking London alone, we find that in 1895 seven of the great London hospitals had among them no fewer than fifty-two vivisectors. These were licensed to vivisect either at the hospitals, or at the schools connected with them. Besides these, the Brown Institution and the Laboratory of the Colleges of Physicians and Surgeons had a score. During the same year, out of a total of 4,676 experiments, 2,317 were performed without anæsthetics, and 603 without obligation to kill before the recovery from anæsthetics, 190 were on cats or dogs without anæsthetics or without obligation to kill, and nine on horses, mules, or asses, under the same conditions. Among these must be included many of the experiments on brains and nerves and on internal organs recorded in the journals, involving dissection alive, together with those performed on animals under the influence of curare. In the face of the official figures, is not all this virtuous indignation of the *British Medical Journal* and the *Lancet* more than a little ridiculous?

Besides, of two things one. Each vivisection is "magnificent work," for which the *Journal* gives honour to those who perform it—and something more weighty than honour, for we must not forget that its owners subsidize "Research" to the extent of £700 a year, spent on "scientific grants"—or else it is a vice to be denied, or apologized for. We cannot allow the *Journal* to take both grounds at once, as it now attempts. If it adheres to the former, it should accept Mr. COLERIDGE's letter as a great compliment instead of repudiating it. We take the latter, and doing so, we urge in the most strenuous way possible upon all who have the best interests of hospital patients as well as animals in view, to see that no money they subscribe is spent in institutions in connection with which vivisection exists. And further than this, we join with the *Lancet* in urging

this special reform of hospitals and hospital schools from the standpoint of medical education. "Nowadays," said the *Lancet* of February 6th last, "science is everything," and practice nothing with the student; he is so occupied with "minute details of physical and chemical experimental physiology that he cannot see the forest because of the immense number of the trees. Such a course may be advantageous to a pure physiologist, but it is entirely outside the training required for a medical practitioner." If, then, it is humane and skilful practitioners that are required by the community, the reform for which there is the most crying need is surely the abolition of experiments on living animals from all association, direct or indirect, with our great hospitals and medical schools. Until this is effected it will be impossible to restore public confidence and we doubt if the great fund now being raised will prove more than a temporary check to the rapidly approaching day of their complete bankruptcy.

PECCA FORTITER !

"SIN boldly!" said a famous personage; "a timid man makes a poor, mean sort of transgressor and to do well as a sinner one must have no scruples." The Devil loves a cheerful liar, and the apologist of vivisection, if he would make anything of his case, must have no scruples when defending his master's work.

With the increased knowledge and ability of our lecturers and speakers new tactics have been adopted by our opponents. Exposed, run down, and driven to bay, a refuge of falsity affords a temporary escape to the meaner sort of opponent, and it appears to be used with increasing frequency. Vivisection is so mean a crime that it naturally attracts men of mean souls, and such persons are not expected to be troubled with scruples when challenged to say what they can for themselves and their work. An untruth is troublesome, and sets a man's invention upon the rack, and one trick needs a great many more to make it good. The whole Vivisection theory and practice is a building resting upon a false foundation; ever and again it must be propped to shore it up; cracks here, flaws there, reveal the insecure basis on which it rests, but the props employed to support it are as weak and untrustworthy as the substratum itself.

Let us illustrate our meaning by a few examples taken from recent debates. There is the fable etymological which is very much in use just now. We are told that Vivisection cannot be cruel because cruelty according to the dictionaries means "an act which causes extreme suffering without good reason." That is one meaning certainly, but it does not cover the whole ground nor does any dictionary say that it does. The word "cruel" is similar to the latin *crudelis*, unmerciful, hard-hearted, wrathful, and is akin to the Sanscrit root *krudh*, to be wrathful. We do not need the etymologists to tell us what cruelty is, and we shall not be silenced by the Vivisectionists who declare that a deed cannot be cruel if it be performed for a good purpose. If we accepted that

ruling we should have to exempt the men who used the rack, the thumbscrew, the dungeon, and the stake in the cause of religion, from the charge of cruelty. Then there is the fable professional. We are assured that no one but a doctor is capable of forming a correct opinion on the Vivisection question. Then why do medical men lecture to lay audiences on our question, write pamphlets against us, and take part in our discussions? Pasteur, the supreme divinity of the scientific school, was not a physician; he was merely a layman, as are most of us. We are often charged with teaching that animal is as sacred as human life. This is a platform taradiddle, too absurd to notice, but it is effective with the ignorant. In this connection we may refer to the dishonest use of the Bible by our opponents; because God gave man dominion over the animal creation it is argued that we have the right to torture the creatures we are permitted to rule; because Christ said "Ye are of more value than many sparrows," it is pretended that we may freely inflict pain on the inferior creatures. To such straits are the defenders of an evil system driven when they try to make God support the work of the Devil.

It is well known, and is in fact admitted by experimenters, that dogs tolerate chloroform very badly. The late Dr. Lewis, Assistant Professor of Pathology in the Army Medical School, laments in one of his works that to rats, rabbits, puppies, and young dogs, chloroform is very fatal; and the late Professor Pritchard told the Royal Commission that he would never think of applying chloroform to dogs as they have an intermittent pulsation consequent on the intermittent character of the heart's action, yet we have often heard vivisectionists declare that dogs bear chloroform quite as well as human beings. It suits their purpose to say so, and they say it boldly. In a similar way we have heard opponents with a smattering of toxicology protest that the action of poisons is identical on animals and men, when every treatise on the physiological action of drugs carefully notes the fact that nearly every plant poisonous to us is eaten by some animal with impunity; that birds and herbivorous animals eat belladonna without injury; that goats, sheep, and horses take no harm from feeding on hemlock; that henbane has little or no effect on sheep, cows and pigs; that pigeons cannot be killed by opium given by the mouth; that prussic acid has little or no effect on horses and hyænas; that cats resist strychnine though dogs succumb to it, and guinea-pigs and monkeys are comparatively insusceptible to it. We have heard all this boldly denied in public by an opponent who had sufficient knowledge to know better but who acted on the *pecca fortiter* principle to discredit the expert opinion of his opponent.

A flagrant example of the bold untruth occurs in the *Lancet* of March 13th, in a note on Mr. Stephen Coleridge's letter to the Prince of Wales, wherein the writer referred to "hapless dumb animals that daily and hourly are slowly cut up alive without even the pretence of anæsthetics." The *Lancet* declares that any such proceeding is wholly illegal, and says that our society is morally *particeps*

criminis unless we prosecute the experimenters. But the *Lancet* knows well enough that it is not illegal under the provisions of the Act to do all this. Thus under curare alone, which is not an anæsthetic, Dr. Stewart reported in the *Journal of Physiology* for July, 1893, a series of awful and prolonged vivisections which he performed on dogs and rabbits. Many other proofs could be given, were it necessary, that Mr. Coleridge was strictly correct in his charges. But the *Lancet* adopts the *pecca fortiter* line, trusting to the ignorance of its readers not to be found out. If the scientific opponent of our crusade be of the veterinary persuasion, we hear a great deal about tuberculin as the test for tuberculosis and mallein as the test for glanders. Koch's awful mortality when his anti-phthisis nostrum was introduced is ignored, especially the fact that his rabbits bore the inoculations far better than his human patients, and we are told that the discovery of the microbe of tuberculosis has robbed consumption of half its terrors by enabling doctors to take precautions against the spread of the disease. The fact is that the discovery has been utterly unproductive of the very smallest improvement in the treatment of the malady, and as a test the report of the Veterinary Department of the Board of Agriculture says that "it has been proved that one effect of inoculating animals with tuberculin has been in some cases that of distributing the tubercle bacillus to parts of the body not previously affected." Nor is the mallein test for glanders by any means the safe and certain proceeding the bacteriologists would have us believe. Hundreds of horses have been slaughtered as held to be suffering from the disease who were entirely free from it. The anti-tetanus serum said to work wonders is profoundly unsatisfactory in practice, and only those who are committed to the inoculation system have the hardihood to rely upon it. But space fails to expose the array of bogus benefits to medicine claimed by the animal torturers. One crime always requires another to support it. Falsehood is the servant-of-all-work employed to aid and abet every sin, and without falsehood the practice of vivisection could not be maintained in this country for a single day.

MORE QUESTIONS ON THE RETURNS AS TO VIVISECTION, &c.

In the House of Commons, on Friday, March 12th, Mr. MACNEIL asked the Secretary of State for the Home Department, whether in view of the fact that in the Return showing the number of experiments performed in the year 1895 on the bodies of living animals in these countries, amounting in all to 4,679, of which 3,119 were performed under special certificates dispensing with anæsthetics, the term "experiment" meant the whole series of experiments carried out on a particular line of research, and that 200 or 300 animals are at times used in a single experiment, while 80 or 90 is a common number, whether there is any record kept of the number of animals used in the 4,679 experiments of 1895; and, whether he will, under the powers conferred upon him by 39 and 40 Vic., c. 77, s. 9, direct that the vivisectors in making reports for the vivisectors' Return for 1896 will state the number of animals used in each experiment?

The HOME SECRETARY: The hon. member is under an entire misapprehension. The number of animals used does not exceed the number of experiments given in the return.

Mr. MACNEIL also asked the Secretary of State for the Home Department, whether the inspectors appointed under 39 and 40 Vic., c. 77, for the purpose of securing a compliance with the provisions of that Act to visit places registered for vivisection, do in fact visit such places during the performance of experiments on the bodies of living animals; whether they inspect the bodies of the vivisected animals after the performance of these experiments, or are usually present at vivisections, and do they usually see the bodies of the vivisected animals; have the inspectors any power to mitigate or prevent the infliction of pain on animals by vivisectors who experiment under Special Certificate A, which permits its holder to experiment without anæsthetics; and, will he state in what degree or to what extent inspection operates as a prevention of unnecessary pain being inflicted on living animals?

The HOME SECRETARY: Yes, sir, the inspectors both visit registered premises during the performance of these experiments and see the bodies of animals upon which experiments have been performed. Certificate A is never allowed except for inoculations, and similar trivial operations, and in every case a condition is attached to prevent unnecessary pain. The safeguards against the infliction of unnecessary pain are the character of the persons to whom licenses are given, the careful inquiry that is made by the Home Office beforehand, and lastly the stringent conditions under which licenses are given and certificates allowed, and which it is the duty of the inspectors to see are properly observed.

In the House of Commons, on Tuesday, March the 23rd, Mr. MACNEIL asked the Home Secretary whether the Inspectors appointed for the purpose of securing a compliance with the provisions of 39 and 40 Vic., c. 77, to visit places licensed for the practice of vivisection, had hitherto been persons who either had practised vivisection in the past, or shown the strongest sympathy with the practice of vivisection; were there any of these Inspectors who were opposed to the practice of vivisection; and whether he would consider the advisability of not confining the inspection of licensed places for vivisection to Inspectors who were advocates of the system. The hon. member also asked whether attention had been directed to the account in the Press of a *soirée*, to which 400 guests were invited, in honour of the completion of the new laboratories in connection with St. George's Hospital Medical School, the report stating that in the physiological laboratory were displayed illustrations of new methods employed in the serum diagnosis of cholera and diphtheria; and whether St. George's Hospital had a licensed laboratory for the performance of experiments on the bodies of living animals; and, if so, why had not this hospital been included in the last return of places licensed for vivisection.

The HOME SECRETARY: The Inspectors have been appointed by my predecessors without regard to their advocacy of or opposition to the system established by statute, under which experiments may be performed on living animals. If occasion arises I shall pursue the same policy. The scientific knowledge required in an Inspector implies a knowledge of experiments on animals, and I am satisfied that the inspection is carried out with the strictest regard to the laws and to considerations of humanity. I have seen a newspaper account of the reception referred to, but do not gather from it that anything illegal took place. There is no licensed laboratory at St. George's Hospital.

Mr. MACNEIL: Will the right hon. gentleman tell me whether all these Inspectors are advocates of vivisection. I am told they are. Will he answer the question, yes or no.

The HOME SECRETARY: I have said they are all acquainted with the most humane method of conducting these experiments, but I am not able to say whether they are advocates of the law as it stands, or whether they desire any change in it. But I am persuaded that you cannot possibly examine and test whether operations are conducted according to law unless you employ professional gentlemen who know something about the matter.

CORRESPONDENCE.

THE ADVANCEMENT OF MEDICAL SCIENCE IN HOSPITALS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I am always at a loss to comprehend the reason for one objection which many of your correspondents appear to hold against our hospitals; an argument which I see is repeated emphatically in your issue of to-day in connection with your article upon the scheme of the Prince of Wales.

You resent the use of the hospitals for the education of our young physicians and surgeons; and you are repelled by the statement that hospitals are means to advance medical science. Why is this?

Surely, our medical men would be most unreliable helpers in face of disease and injuries without their hospital training, and if this be taken from them, what method of education do you propose to substitute?

I grant freely that the tuition is in need of improvement; there is far too much practice in physiological theory of disease, and far too little really helpful therapeutic teaching; whilst much invaluable time is wasted in matters but very distantly related to the work which the students will be occupied with in their professional life; but the aptitude for observation, and diagnostic powers, demand means of teaching which only the hospitals can give within the short time available for the purpose.

I should greatly wish to hear what alternative you can suggest,—Yours obediently.

GERARD SMITH, M.R.C.S., L.S.A.

37, Gloucester Park, London, W.

March 2nd, 1897.

[This is a matter of great importance. There is no objection to teaching the rising generation of medical men how legitimately to treat patients, by taking them through the hospitals. Quite the contrary. But the fear is that the expression "we look to the voluntary hospitals for means of medical education and the advancement of medical science," in the royal manifesto may by the physiological scientists and their adherents be taken to cover research on the bodies of sentient animals.—Ed. Z.]

AN OMISSION SUPPLIED.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I am sure that, although it was not at all intended to be exhaustive, you will regret that in the list, published in last number of your excellent periodical, of notable signatures to the Memorial against Registration of the "Pasteur Institute," there was the omission of one so valued as that of Dr. Maxwell Simpson, F.A.S., M.D., LL.D., etc., late Professor of Chemistry, and author of several important scientific works.

THE MANAGER OF THE FULHAM AND
WEST KENSINGTON OFFICE OF THE
PROTEST COMMITTEE.

86, Lancaster Road, Notting Hill,

March 2nd, 1897.

[Our Correspondent is quite right—the list we gave a month ago was by no means intended to be exhaustive. We gave a few as specimens from amongst many, and said so.—Ed. Z.]

THE PUBLIC, THE ROYAL JUBILEE FUND, AND THE HOSPITALS.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Will you accord me space in your columns to draw the attention of your readers to certain probable consequences of the Prince of Wales' Hospital Scheme? The scheme, of course, is conceived in the most benevolent

spirit, but what would its success involve? That the governing bodies of the hospitals and their medical staffs would be placed in a position of even more irresponsible power than that which they occupy at present; and it is significant that even as it is, so many scandals have arisen that there is an increasing demand, on the part of those who have looked closely into the matter, for bringing the hospitals more under the jurisdiction of the public. The Hospital Fund, on the other hand, would entirely free the governing bodies from all necessity to consider public opinion at all, and we know that these bodies have been much harassed by unwelcome criticism of late. Therefore, their dearest ambition is, naturally, to stand in a position which will enable them to snap their fingers at popular feeling.

Now, such a position of absolute power is one that no body of men can enjoy with safety to those over whom it is exercised, or for that matter, with safety to their own moral characters; for the temptations to abuse it are overwhelming. In the case we are considering, these temptations are of an especially dangerous and insidious kind. Medical men are presumably not more than human, and it is not necessary to take a particularly harsh view of them in order to realize what I can only call the insanity of placing at their mercy a number of poor, helpless, and ignorant people who are utterly without means of protest, even if they should know when their medical attendants are (perhaps) subjecting them to treatment for purposes other than the cure of their ailments. The doctor has his science as well as his patient to think of; he has his name and his living to make; and if he is an ardent student, the temptation to swerve a little from the line of treatment best suited to the invalid, or to allow his recovery to be delayed for a time in order to glean a little wayside knowledge, must be overwhelmingly strong. And it would be so easy for the doctor to argue with himself that through a little pain and inconvenience to one patient, he might save the lives of many, and, above all, make some discovery of value to science. But would the public give their money to hospitals if they knew that it might be supporting such practices? If they render the hospitals independent of their opinion by means of this fund, what hope have they of even making an effective protest against such abuses, should there be reason to know or to fear that they exist? If this fund fulfil its object of paying off the debts of the hospitals, the governing bodies can treat all subsequent objections of the public to the use of hospital patients for experimental purposes with scientific scorn. They do so now, but not quite so openly as they will hereafter. Dr. De Watteville, who, some years ago, wrote in the *Standard*, Nov. 24th, 1883, urging that subscribers should make the hospitals very comfortable for patients, in order to compensate them for having to be used as clinical material (he uses the term *corpora vilia*) will, in time to come, have a larger following, only then, the question of comfort for the patients will be regarded as obsolete. The appeals will then be made for subscriptions solely on the ground that further medical knowledge is urgently needed, and that the beds for experimental purposes are insufficient.

The trend of medical feeling is at present all in this direction. Let us not forget the significant fact that a bill to vivisect criminals was lately brought before the legislature of an American state, and only thrown out by a small majority. The prevalence and awful nature of the vivisectional experiments in America on animals fully accounts for this natural progress of sentiment; but we must not forget that we ourselves have animal vivisection in England; nay, in the medical schools attached to our very hospitals. I do not think that we can claim such radical superiority over the Americans as to feel perfectly secure that similar education may not in course of time lead to similar results in ourselves. At any rate, it can scarcely be denied that the perpetual familiarity with the idea of torturing sentient creatures for scientific ends, and the sight of their suffering, must inevitably tend to make the idea of sacrificing one human being for the good of the many, or of science, seem less heinous and less terrible. As a significant sign that many people are alive to this danger, a society has lately been started whose sole object is the protection of hospital patients from such treatment.

The matter is one of very grave public peril, and it is sad to think that our successors perhaps, fifty years hence, may have cause rather to curse than to bless the benevolent people who

are coming forward so liberally to support what they believe to be a scheme of wide-spread beneficence.

This misfortune could perhaps even yet be averted, if public meetings could be held, with the object of rousing attention to the subject, and of devising some means by which the public could safeguard their own rights. It ought to be possible to take some precaution by which they could prevent their money being put to purposes of which they disapproved, and to protect from possible ill-treatment the poor and helpless who trust themselves within the doors of our hospitals. If only a powerful enough protest could be made, and the issues rendered sufficiently plain, thousands of intending subscribers might be induced to give their donations only on condition that the fund should be administered by certain bodies in which the public could have representatives, and under certain restrictions which would entirely obviate the danger to which attention has been drawn. Meanwhile no stone should be left unturned that may bring the danger home to the general public.—I am, sir, yours truly,

Cassencary, Creetown, N.B.

MONA CAIRD.

THE PRINCE'S FUND AND VIVISECTION.

(FROM THE "HAMPSTEAD EXPRESS," MARCH 6TH.)

SIR,—To say hard things of other people while hiding one's personality under an assumed name always seems to me a little "sneaky," and I should think better of "Libra" if he had the courage to stand by his words. But, on the other hand, it is a good sign that the advocates of the shocking cruelties of the physiologist's laboratory so often prefer to keep out of sight. It is characteristic of the practice which, I am sure, only survives because people do not know what it really is.

In the report of the Select Committee of the House of Lords appointed to inquire into the metropolitan hospitals (June, 1892) we find the following remarkable words:—"It is one of the complaints of those who find fault with the present hospital system that the hospitals have become mere adjuncts to the schools, plunging into all kinds of extravagance for the sake of their students, and for the advancement of science, when they ought to be strictly devoting themselves to the relief of the suffering poor, and to no other object."

This view, that the hospitals are adjuncts to the schools, is borne out by the words of an eminent surgeon, who, in the *British Medical Journal* (April 23rd, 1884), is reported to have said that "the chief use of hospitals is that they should teach practitioners of medicine and surgery. . . . First, a hospital should be a place for medical education; secondly, for the relief of suffering; and, thirdly, for the training of nurses; all of which objects should be considered in due proportion by those exercising the management." Also in the *Lancet* the then President of the Medical Society is reported to have said:—"The greatest use of hospitals is to promote the advancement of medical science, and to afford us improved methods of recognizing and treating disease."

The intimate connection between the vivisectional laboratory and the hospital ward is, however, best shown by the *Lancet* (Nov. 3rd, 1883), when two vivisectors, having described their experiments with a powerful drug on some cats, remarked, quite unconscious apparently that they were saying anything unusual: "In addition to these experiments we have made some observations clinically" (*i.e.* on patients). And then they proceeded to give details as to how the patients experimented on felt throbbing pains in the head, turned blue in the face, fell to the ground in a swoon, and so on. The same two gentlemen, in a book, which is a standard work on therapeutics, have given a number of experiments performed on hospital patients, not for their own benefit, but in the interest of so-called research.

That the chief use of the hospital is as a medical school is openly admitted by members of the profession, and when the subject was publicly discussed a few years ago a physician at one of the women's hospitals wrote in the *Standard*:—"So far from there being a reason why moral and pecuniary support should be refused to hospitals on the ground that their inmates are made use of otherwise than for treatment, there is every ground why more and more should be given to them, in order to compensate by every possible comfort for the discomforts necessarily entailed by the education of succeeding generations

of medical men and the improvements in our methods of coping with disease."

The keenest of English vivisectors has also told us plainly that the saving of human life comes with him "after the furtherance of science."

In the face of such evidence, which I limit only out of consideration for your space, I think "Libra" must admit that, as long as the vivisectors are allowed a free hand in our hospitals, as they are at present, the Prince's fund will not be the unmixed boon to the poor that people imagine, and certainly cannot have the support of those who feel for the tortured animals or for the physiologist's "clinical material," as the patients are called.—Yours etc.,

2, Thurlow Road.

ERNEST BELL.

RETURN OF LECTURES AND MEETINGS.

The following is a further return of the lectures and meetings, arranged at the instance of the Victoria Street and International Society, which have taken place as stated below:—

Date.	Speakers.	Place of Meeting.
1897.		
Jan. 3	Mr. A. Westcott	Social Hall, Wandsworth.
" 10	" "	St. Andrew's Church, Stockwell.
" 10	" "	Gladstone Club, Leytonstone.
" 16	" "	Liberal Club Association, Dulwich.
" 16	Mr. R. S. Wood	
" 17	" "	Liberal Club, Wimbledon.
" 17	Mr. A. Westcott	
" 17	" "	St. Andrew's Church, Stockwell.
" 19	Miss A. Garland	
" 20	Mr. A. Westcott	Independent Church, Brixton.
" 20	Mr. R. S. Wood	
" 21	Mr. A. Westcott	Holy Trinity Church, Hoxton.
" 24	" "	
" 25	" "	Secular Society, Chatham.
" 25	Miss A. Garland	
" 26	Mr. A. Westcott	Tobacco Workers' Club.
" 26	Mr. R. S. Wood	
" 26	Rev. L. S. Lewis	Temperance Institute, Hull.
" 28	Mr. R. S. Wood	
" 28	Mr. A. Westcott	Town Hall, Fulham.
" 31	" "	
Feb. 1	" "	St. Mary's Club, Somers Town.
" 2	Dr. Berdoe	
" 2	Rev. T. Perkins	Folk's Hall, Dalston.
" 2	Mr. T. A. Williams	
" 3	Mr. A. Westcott	Walthamstow.
" 3	Mr. R. S. Wood	
" 3	Mr. A. Westcott	St. Alban's.
" 4	Mr. T. A. Williams	
" 5	Mr. A. Westcott	New Malden.
" 7	" "	
" 7	" "	Radical Club, Mildmay Park.
" 8	" "	
" 8	Mr. T. A. Williams	Phoenix Lodge, Stratford.
" 10	" "	
" 11	" "	Independent Labour Party, Islington.
" 12	" "	
" 13	" "	Radical Club, N. Camberwell.
" 14	Mr. A. Westcott	
" 15	Mr. T. A. Williams	National Secular Society, Camberwell.
" 16	" "	
" 16	Mrs. Chas. Mallet	Radical Club, Paddington.
" 17	Mr. T. A. Williams	
" 17	Dr. Haughton	Phoenix Lodge, Euston.
" 17	Rev. E. S. Manbey	
" 17	Mr. R. S. Wood	Phoenix Lodge, Canning Town.
" 17	Mr. A. Westcott	
" 18	Mr. T. A. Williams	Public Lecture, Stratford.
" 18	" "	
" 19	" "	Club Lecture, Hoxton.
" 20	" "	
" 21	" "	Club Lecture, St. Luke's.
" 21	Mr. A. Westcott	
" 21	Miss A. Garland	Labour League, Poplar.
" 21	" "	
" 22	" "	Coffee Tavern, Highgate.
" 22	" "	
" 22	" "	Temperance Hall, Bermondsey.
" 22	" "	
" 22	" "	Weston-super-Mare.
" 22	" "	
" 22	" "	Public Lecture, Canning Town.
" 22	" "	
" 22	" "	Welcome Hall, Norwood.
" 22	" "	
" 22	" "	Chapel, Falcon Square, E.C.
" 22	" "	
" 22	" "	Club, Hampstead Road
" 22	" "	
" 22	" "	Club, Newton Street, Holborn.
" 22	" "	
" 22	" "	Friends' Institute, Commercial Rd.
" 22	" "	
" 22	" "	Club, Pitfield Street, Hoxton.
" 22	" "	
" 22	" "	Mission Hall, Wigmore Street, W.
" 22	" "	
" 22	" "	Progressive Club, Isle of Dogs.
" 22	" "	
" 22	" "	Hayfield Hall, Mile End, E.
" 22	" "	
" 22	" "	Huddersfield.
" 22	" "	
" 22	" "	Street.
" 22	" "	

Date.	Speakers.	Place of Meeting.
Feb. 22	Mr. T. A. Williams	Caledonian Road.
" 22	Mr. R. S. Wood	
" 22	Mr. A. Westcott	
" 23	Mr. T. A. Williams	
" 24	" "	Workmen's Club, Thomas Street, E.
" 25	" "	Sons of Phoenix, Kensington.
" 26	" "	Archway Tavern, Highgate.
" 26	" "	Beacon Hall, Stratford.
" 26	Mr. A. Westcott	Whitfield Street, Old Street, E.C.
" 26	Mr. R. S. Wood	St. Mary's Social Club, Somers
" 27	Mr. A. Westcott	Town.
" 27	Mr. T. A. Williams	Socialist Club, N. London.
" 28	" "	Pitfield Street, Hoxton.
" 28	Mr. A. Westcott	Mission Hall, James Street, W.
Mar. 1	Dr. Haughton	Liberal Club, Deptford.
" 1	Mr. T. A. Williams	Gloucester.
" 2	" "	Phoenix Lodge, Highgate.
" 3	" "	Fitzroy Hall, W.
" 3	Mr. R. S. Wood	Lodge, Lower Marsh, Lambeth.
" 4	Mr. T. A. Williams	
" 6	" "	Phoenix Lodge, Homerton.
" 6	Ernest Bell, Esq.	Covent Garden.
" 6	Mr. R. S. Wood	
" 7	Mr. T. A. Williams	Ideal Club, Tottenham Court Road.
" 7	Mr. A. Westcott	
" 8	" "	Gladstone Club, Brixton.
" 8	" "	Gladstone Club, Bermondsey.
" 8	Mr. T. A. Williams	Walworth.
" 9	" "	St. Albans.
" 10	" "	Baptist Chapel, Stratford.
" 10	Mr. T. A. Westcott	Reform Club, Newington.
" 11	Mr. T. A. Williams	Phoenix Lodge, Bermondsey.
" 12	" "	Friends' Institute, Commercial St.
" 12	Mr. R. S. Wood	
" 13	Mr. T. A. Williams	Goodwill Coffee House, Dorset Square, W.
" 15	" "	Baptist Chapel, Notting Hill.
" 15	Mr. R. S. Wood	Jewish Club, Whitechapel.
" 15	Mr. A. Westcott	
" 16	" "	Despard Club, Wandsworth.
" 17	" "	Co-operative Society, Grays.
" 17	Mr. T. A. Williams	Birmingham.
" 20	" "	

FOREIGN INTELLIGENCE.

UNITED STATES.

EXPERIMENTAL PHYSIOLOGY IN THE PULPIT.

This is the latest development of the present rage for practical science. We learn from the *Chicago Tribune*, February 16th, that a Michigan preacher killed a couple of cats with nicotine in the pulpit of his church, to illustrate the effects of nicotine. We give the report in full:—

"KILLING CATS IN THE PULPIT.

"CARDILLAC, MICH., Feb. 9.

"The announcement that the Rev. W. L. Laufman, assisted by Dr. C. E. Miller, would kill two cats in the pulpit of the Methodist Church, to illustrate Laufman's sermon on tobacco, was sufficient to pack the church. Prominent on the pulpit were packages of fine cut and plug chewing tobacco. Laufman contended in his sermon that tobacco in any form was bound to fill the user with nicotine, and eventually produce death. In tragic tones he declared that the Spain of to-day was not the chivalric Spain of Columbus' time, because of the prevalent use of tobacco. 'Turkey,' he said, 'is now fallen low on account of its natural vice, tobacco.'

"He proclaimed that France had a rapidly-diminishing population on account of the use of tobacco, and said: 'We, of all nations the most nervous, can least of all afford to play fast and loose with tobacco, the enemy of the body, the mind, and the soul.' Holding aloft a pound plug of tobacco he assured his hearers it contained enough grains of nicotine to kill two hundred men.

"Then the cats were brought up by Dr. Miller. An assistant held them while the doctor administered the nicotine. The first one died in a minute and a half, while the attendant held it, after three drops of nicotine had been placed on its tongue. The next cat, a large one, was given but two drops, the purpose being to illustrate the sickness and spasms which the first dose of tobacco creates. A second dose of two drops was given, and in a minute and a quarter the cat was dead.

"The Rev. Mr. Laufman announced that next Sunday he would

kill some more cats to show the effect of alcohol, and also have on exhibition the stomach of a drunkard."

PREVENTION BILL PASSED IN WASHINGTON STATE.

A small bill "to prevent and regulate vivisection and regulate dissection in the schools of the State of Washington, except medical and dental schools," has been passed into law. Mrs. Lydia A. Irons, a correspondent at Athol, Idaho, writes that there was a hard fight to get the bill through, an attempt being made to exempt the State Agricultural College and Veterinaries Schools. It was, however, passed by the Senate just as it came from the other house. The following is the text of the law:—

An Act to prevent vivisection and regulate dissection in the schools of the State of Washington except medical and dental schools or medical department of any school and providing a penalty therefor.

Be it enacted by the Legislature of the State of Washington:—

Sec. 1. No teacher or other person employed in any school in the State of Washington, except medical or dental school or medical or dental department of any school, shall practise vivisection upon any vertebrate animal in the presence of any pupil of said school or any child or minor there present; nor in such presence shall exhibit any vertebrate animal upon which vivisection has been practised.

Sec. 2. Dissection of dead animals, or any portion thereof, in the schools of the State of Washington, in no instance shall be for the purpose of exhibition, but in every case shall be confined to the class room and the presence of those pupils engaged in the study to be illustrated by such dissection.

Sec. 3. Any person violating the provisions of this Act shall be punished by a fine of not less than fifty nor more than one hundred dollars.

ZÜRICH.

SEQUEL TO THE PLEBISCITUM OF 1895.

Under the humorous heading of "How to wash the poodle without making him wet," the *Bülach-Dielsdorfer Wochen-Zeitung*, a democratic paper, reminds its readers that on December 22nd, 1896, the proposal for the total abolition of vivisection in the Zürich Canton was rejected by about 39,000 to 17,000, chiefly in consequence of the authorities making a rival proposal of a new law for the control and limitation of vivisection, which proposal was accepted by about 35,000 against 19,000. The new law became operative on January 1st, 1896, but no action was taken by the government towards putting it in force, until last autumn, when a commission of experts was appointed to report on the matter. This appointment of experts, as the witty writer in the journal remarks, was like setting a goat to take charge of the vegetables in the garden. The experts drew up a scheme which was hurriedly accepted by the Government Council and by the Board of Education, after a few verbal alterations had been made. This scheme is now in the hands of the Commission of the Canton (Zürich) Council, and the Zürich S.P.C.A. has brought various matters to the notice of the Commissioners: the chief among them being (a) the worthlessness of the control if it is to be exercised by the Board of Education which has already proved itself in full sympathy with the vivisectionists; and (b) the necessity for the publicity of the control. With regard to this latter, the writer in the journal remarks that what is required is rather control or regulation of the publicity, so that it shall be possible for the public to be represented at each vivisection experiment by, say, a member or members of the S.P.C.A., or by one or more newspaper correspondents with full power to report the proceedings. In the meantime the poodle remains innocent of either soap or water, for the vivisection experiments continue without control and without limitation, in spite of the 35,000 who carried, more than a year ago, a vote to the contrary.

GERMANY.

Dr. Paul Förster announces in the *Thier-und-Menschenfreund* that his pamphlet on Vivisection, being in the main a reprint of his address at the Buda-Pesth Congress, has passed through eight editions, and that each edition from the third to the eighth has been altered, improved, and enlarged. He publishes the following in the *Freund* among other supplement-

tary matter. It is taken from the *Centralblatt für medizin. Wissenschaft*, 1896, No. 40:—

"The dog with partly extirpated spinal cord.—Fr. Golz and R. Ewald succeeded in keeping a dog alive after they had, during a series of experiments with long intervals between each, extirpated the sacral, lumbar, and thoracic portions of the spinal cord, so that, exclusive of the brain and the *medulla oblongata*, only the cervical portion remained; it being impossible to remove that without causing death, owing to the respiratory nerves (*phrenicus* and others) which lead from it. By extreme antiseptic precautions during the operations and most careful attention afterwards, cutaneous inflammation and decubital sores, which for a long time have been considered as necessary concomitants of operations on the spinal cord, were avoided. Yet at the conclusion of each operation at which the vertebral column was opened and part of the spinal marrow removed, a lowering of the vitality, as though caused by a severe shock to the system, was evident. But from this the animal gradually recovered. Apart from the crippling of the muscles of the lower part of the body, which was permanent, most of the functions were gradually restored. The maintenance of the normal conditions of the digestion was due to good nourishment."

Other consequences of the operations, especially those connected with the digestion, etc., are then given in detail.

PARIS.

THE ACTRESS AND HER DOG.

The following extraordinary story appeared in the Paris edition of the *New York Herald* on the 14th ult.:—Mlle. Jane Pierny, of the Folies-Dramatiques, was recently bitten on one of her little fingers by a favourite pet dog, which was shortly afterwards recognised to be mad and was accordingly destroyed. The actress at once went to the Pasteur Institute and was under treatment there for a week, during which time she continued to act at the theatre. Mlle. Pierny's dog was, according to an interview in the *Temps*, of extremely sweet disposition. At the early part of last week, however, it showed signs of madness, biting right and left. The actress thought that the animal was simply jealous of a fox-terrier which recently became a member of her household. She quickly changed her opinion when the dog bit one of her little fingers almost to the bone. The following day the animal showed undoubtedly that it was mad. The whole of Sunday Mlle. Pierny wept at the loss of her pet, quite forgetful of the danger which she was running, for she had not yet been to the Pasteur Institute. For the past week, however, she has undergone the treatment at that institution, and all danger may now be considered to be over. But she has not escaped a considerable amount of suffering. Fever, insomnia, and loss of appetite are some of the results of her treatment. Notwithstanding these disagreeable symptoms and the grief consequent upon the loss of her pet, Mlle. Pierny has every evening appeared in "Tohu-Bohu" at the Folies-Dramatiques.

The above story bristles with absurd improbabilities. The dog was "accordingly destroyed," says the reporter, apparently thinking that the best thing to do; but the authorities of the Pasteur Institute themselves, some time ago recommended the securing of the dog, and the confining of it for a few days. "The actress thought that the animal was jealous" of a new arrival, but changed her mind when it bit her and considered it mad. The animal might still have been simply jealous, and although it is assumed to have gone mad, there is no proof at all that it was so. The oddest thing is that the lady was only inoculated daily for a week, and then has been—at least by the newspapers—pronounced out of danger. If the Pasteurian authorities have given that assurance it is contrary to their usual teaching, and seems to have been regarded as one of those cases where it is necessary to inoculate "to quiet fears." Still, it will go into the statistics no doubt, as a genuine case of life saving, than which nothing could be more delusive.

DEATH OF ANOTHER PASTEUR PATIENT.

PARIS, March 19th.—A man named Davoust, living at the village of Livry, was seized with a terrible attack of hydrophobia on arrival in Paris last night. He had been bitten by a mad dog last June, and with five other victims was treated at the Pasteur Institute here, all returning to Livry apparently well. Davoust, who was bitten on the hands, afterwards experienced severe pain in his arms and shoulders, and decided to return to the Pasteur Institute. He died the same night.

P. C. A. NEEDLEWORK GUILD.

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THE
ZOO PHILIST.

VOL. XVII.

1897-8.

Published by
THE NATIONAL ANTI-VIVISECTION SOCIETY,
20, VICTORIA STREET, LONDON, S.W.

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Printed by MILLER, SON, & COMPY., LTD.,

FINSBURY CIRCUS BUILDINGS, LONDON, E.C.; AND FAKENHAM, NORFOLK.

THE ZOO PHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVII. No. 1.]

LONDON, MAY 1, 1897.

[POST FREE, 3½d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Annual Meeting of the Society has been fixed to be held in the Queen's Hall, Langham Place, on Friday, May 21st, at three o'clock. The Right Hon. Lord Coleridge, Q.C., has kindly consented to preside.

YEARS ago, the great and important city of Liverpool was the residence of many warm supporters of our work, but from various causes the interest has, of recent years, flagged. Now, however, on the initiative of the Committee of the Society, a revival has taken place. During the month of March an organizing agent was at work bringing the subject of anti-vivisection to the notice of leading residents, clergy, and others. The result was that considerable interest was aroused, and at the end of March and beginning of April a series of meetings was held, which proved very successful.

THE principal speaker on behalf of the Society was Mrs. Charles Mallet, whose addresses seem to have made a good impression, and aroused much new interest.

Several persons have joined the parent Society as members, and a Liverpool Society, affiliated to the parent in Victoria Street, has been started, of which Miss Penrell, of 9, Brougham Terrace, West Derby Road, has kindly consented to act as the first honorary secretary. This successful commencement of a revival of our work in Liverpool will, we feel confident, prove most agreeable to our friends and supporters.

AT Bolton, Lancashire, too, an important centre of population engaged mainly in the cotton industry, new ground has just been broken. We believe that action was taken here on the suggestion of Mrs. Herbert Philips, so zealous a supporter, with her husband, of the Manchester Branch Society. The matter was ardently taken up by the Misses Wolfenden, who found a zealous supporter in the Rev. C. J. Street, an excellent public speaker, and a thorough-going opponent of Vivisection from the moral point of view. Towards the end of March a public meeting was held, a report of which will be found on another page.

As will be seen, here also a local Society has been formed, the Committee and Officers being as follows:—President, Col. Ainsworth, J.P.; Vice-Presidents, Mr. J. P. Thomasson (formerly M.P. for the borough), Canon Doman, M.A., and Mr. T. Walker, J.P.; Chairman of Committee, Rev. C. J. Street; Hon. Treasurer, Mrs. Arthur Greg; Hon. Secretary, Miss M. E. Wolfenden. Dr. Haughton went down on behalf of Victoria Street, and the proceedings were quite successful. We congratulate our Bolton friends on their good start, and heartily wish them "God speed."

THE *Standard* of April 7th had a remarkable article on "Stamping out Rabies," in which some very plain speaking occurred relative to the little clique of "experts" who dominate the Board of Agriculture. "With their eyes fixed upon the experimental laboratory, they see nothing but their own theory, which rests upon an unverified, and, therefore, unscientific assumption, nor are they above juggling with the evidence in order to support it."

THE writer points out that the Pasteurian theory of hydrophobia is unscientific, because nothing is known with exactitude about the nature of the poison, though it has been studied in every laboratory in the world. The microbe, if it exists at all, has eluded every attempt to detect it, and consequently nothing can be known about its life history. In the case of other micro-organisms, supposed to be the cause of disease, they have been minutely

investigated for years. Yet, as Professor Grüber says of the bacterium of cholera, the more deeply it is studied the more mysterious does it become. But the Pasteurians ask us to believe that they are acting scientifically when they inoculate their patients with the product of a bacterium of which they can know nothing because it has never yet been isolated.

IN studying the statistics of mortality from diphtheria and the claims made on behalf of the anti-toxin treatment, it is important to bear in mind the fact that until lately diphtheria was not claimed to be such a very fatal disease, except in epidemics of the malignant variety. It must be remembered that there are many types of the malady; in some epidemics the type is very mild, in others extremely severe. A comparison of the effects of various modes of treatment will be very misleading unless the character of the disease is well ascertained.

THE *Medical Brief* for March, recalling these facts, says (p. 342) that "unless the friends of the serum-therapy can show a death-rate of less than ten per cent., or that diphtheria is a much more fatal disease now than formerly, they utterly fail to establish its boasted therapeutic value."

DR. LAWRENCE, the editor of *Medical Brief*, maintains that if there be any virtue at all in anti-toxin it is due solely to the carbolic acid which Behring, Aaronson, and other makers add to it to preserve it. For our part we think the carbolic acid has enough to do to disinfect the serum and prevent its killing the patient right away.

PASTEUR has thrown the art of medicine back a quarter of a century. By diverting the attention of doctors to the barren study of bacteriology he led them away from the fertile fields of clinical investigation and rational therapeutics and so concentrated in the laboratory the science that should have been employed at the bed-side. Pasteur has given the medical profession an interesting study, and the patients have to pay for it with their lives.

THE *Practitioner* (March, p. 226) in an editorial on "The Prince and the Hospitals" said: "The suggestion that physiological experiments of any kind whatever are made in hospitals is absurd, and it is simply untrue that anything approaching to cruelty is practised." It is "absurd" to suppose that Dr. Malcolm Morris, the editor of the magazine in question, was not aware that such experiments are made in hospitals, and in proof of the truth of the charge we ask our readers to refer to the *Journal of Physiology* (vol. xiii., pp. 407-418), where will be found a paper on the "Innervation of the Mammalian Heart," by W. M. Bayliss, B.A., B.Sc., and Ernest H. Starling, M.D., M.R.C.P., Research Scholar of the British Medical Association: "From the Physiological Laboratory, Guy's Hospital."

THE experimenters state (p. 408) that "we have confined ourselves to dogs which were anæsthetised with chloroform and a large dose of morphia (three to five grains)." The morphia could not have been required had the anæsthesia by chloroform been effectual; it was evidently merely a whiff at the beginning. Now for the truth of the matter—"Tracheotomy being performed, an

injection of curare was given." Nerves were cut and stimulated and the chest was opened with bone forceps, "the chest walls were now dragged apart with hooks, the pericardium incised, and its margins stitched to the edges of the thoracic parietes. By this means the heart was raised well out of the chest, so that it was unaffected by the movements of the lungs." The morphia could at best have only stupefied the victim of this awful living dissection. Evidently curare was the drug depended on.

IT is generally believed that bad whisky is more injurious than good. It is popularly supposed, and doctors have often urged it, that the fusel oil in new and inferior spirits is responsible for terrible alcoholic ravages amongst the poor. The *Medical Times* of April (p. 114), says that it takes no more of the worst alcohol obtainable to kill an animal than it does of the very best. We do not accept the results of such cruel experiments. Alcohol in any form is a poison to those unaccustomed to its use. To an animal it is a deadly poison, whether good or bad, because neither it nor its progenitors have been used to it.

DR. J. R. WOOD, of New York, recently read a paper before "the Society of Medical Progress," in which he said—"To-day the medical ear is eager to catch the first cry of a new-born thought. The whole medical world is expecting at each click of the telegraph to be told of some new wonder or great hope and blessing for the suffering sick." This is the sort of thing that goes down so well in medical meetings when reporters are present. The suffering sick have not found recent discoveries in serum-therapy, anti-toxins, etc., quite so profitable as their inventors and exploiters. Dr. Wood added that "we should have a care lest in magnifying the material microbe we minimise the intellectual man." Forgetting the patient in the microbe is a good idea. We thank thee Dr. Wood.

DR. J. SAINT-JUST of Paris, in the *Medical Brief* for March says that the serum business in France has been so overdone, and the remedy has fallen into such disrepute that an attempt has been made by the manufacturers who hoped to make a fortune out of it to replace it with an artificial substitute which, on analysis in the majority of cases, turns out to be nothing but a solution of common table salt. Not at all a bad thing this chloride of sodium, but people do not like paying fancy prices for it.

THE New York *Medical Record* says that Dr. Winters has received many reports from physicians of that city who have given up the use of anti-toxin because it has been followed by so high a mortality. Dr. Winters has seen a number of cases in which its employment was followed by tetanic convulsions, ending soon or after many hours in death; also cases of sudden death with other symptoms. This proves to Dr. Winters that it is not "anti-toxin," but a toxin which adds to the dangers of diphtheria.

IN the middle ages the lungs of long-winded animals such as the stag, the hare, and the fox were considered valuable remedies for patients afflicted with chest complaints. A French physician, M. Brunet, has inoculated guinea-pigs with the juice of the lungs, and then tested their susceptibility to inoculations of tuberculosis. The *Practitioner* commenting on the new invention, says:—

"It seems hardly credible that this juice can have any therapeutic value." As M. Brunet's lung juice is prepared from the organs of dead sheep we can understand the objection; had it been a product of a living animal it would have appealed to the scientists far more forcibly. But what a nest of unclean things the doctors are making of our "vile bodies"!

IRON, arsenic, and mercury are three well-known and largely employed drugs which have an almost specific effect on certain diseases, yet as Dr. Grosz, of the Rudolf Hospital, Vienna, says, their physiological action is inexplicable and can in no wise be harmonized with their curative effect. The most scientific physician could not afford to dispense with them, and is perforce obliged to employ them empirically; this, however, he incessantly declares is a most unscientific method.

THAT well-known propagator of Christian knowledge, the author of "Our Secret Friends and Foes," is not the only member of his family who is devoted to the cult of microbes. In *Nature*, of February 18th, appeared a highly eulogistic article from the pen of Mrs. Percy Frankland on Dr. Yersin and his labours. "When a youth of twenty," says Mrs. Frankland, "Yersin had the rare good fortune to obtain an entrance to the Institut Pasteur." Step by step are traced the researches of the young savant in the microbiology of the plague. We are told that:—

"Healthy rats and mice inoculated with pure cultures of this bacillus succumbed to the typical plague symptoms; and Yersin had thus accomplished the first step in his investigation—the identification of the specific virus of plague."

After this he discovered them in numbers "sticking to the legs of flies." The next proceeding was to prepare a serum, and this he eventually succeeded in obtaining from the horse.

MRS. FRANKLAND closes her article with a lament that the glory of amassing all this knowledge (Christian or otherwise) should be left to foreigners.

"In conclusion, it may be asked, How long is England to rest content to knock as a humble suppliant at the door of foreign institutes for assistance when overtaken by disaster, as is now the case in India? Why should Paris supply the means for relieving the suffering of our fellow-subjects in India?"

"The answer and reasons for that answer are, alas! but too well known to require repetition here; and we can only hope that in the future, at present dim and obscure, the barriers which now so formidably impede medical progress in this country may yield before the enlightened pressure of public opinion."

No, Mrs. Frankland, the answer is not as you suppose. It is to be found in the *Lancet* of April 3rd, p. 976:—

"According to a telegram which we have received from Bombay the Yersin serum treatment of plague has practically failed. So far the mortality has been 50 per cent. in the selected cases within forty-eight hours of the attack. The hospital mortality is stated to be 60 per cent. in all cases."

THERE are two items relative to the diphtheria anti-toxin treatment. The first from the *British Medical Journal* of February 6th, and the second from the *Lancet* of February 27th, which are worth putting on record. The former, which occurs in the Berlin letter relating to the statistics of the Friedrichshain Hospital, records an effect which was all but fatal, resembling in all other points the case of Dr. Langerhans' child:—

"Except in one case, no untoward secondary effects of any

importance were observed. The one exception was a child, aged seven years, with scarlet fever and a suspicious looking tonsillitis. Immediately after the injection a very severe, evidently dangerous, collapse took place, lasting about two minutes. The child seemed lost, but immediate and thorough application of stimulants saved its life. A few drops of blood issued from the point of injection, so that possibly a vein may have been punctured. However this may be, the case is of importance as bearing upon the problem of the nature—whether dangerous or non-dangerous—of anti-toxin serum; for the child was long past infancy. The general infection was not of a serious nature, and nothing but the serum could be held responsible for the sudden catastrophe."

The *Lancet* extract is from the letter of their Russian correspondent. It is not a little curious, as showing that the faith of the public is much greater than that of the professors themselves:—

"A certain educational institution recently requested an opinion from the Academy on the desirability or otherwise of inoculating every pupil in the institution with anti-diphtheritic serum as a prophylactic measure, diphtheria having already made its appearance among the pupils. The matter was submitted to the *Conferentzia* of the Academy (or committee of professors), and their reply was recently published. It is to the effect that such prophylactic injections would, in their opinion, be useless. This *ex-cathedra* statement seems worthy of record."

IN a leading article on a paper by Dr. Flexner, of the Johns Hopkins Pathological Laboratory, on "Terminel Injections," the *British Medical Journal* (April 17th) happily sums up the actual result of a vast number of these learned researches. Dr. Flexner's paper was contributed to the *Journal of Experimental Medicine*, vol. i., p. 559, and consists of an enquiry into the microbes to be found in the excretions of 225 persons dying of heart or kidney disease, or both. He discovered quite an interesting collection of cocci of various kinds. But what does it all come to? Just this. Says the *Journal*: "The whole paper is a laborious and interesting statement in bacteriological terms of *what has long been known clinically*."

THE *Medical Press* (March 31st), records an instance of a combination of tortures—inoculation and starvation—which can only be described as examples of useless scientific curiosity. The note is headed: "The Influence of Starvation on the Action of Certain Toxins":—

"In the course of their investigations on factors capable of influencing the action of certain bacterial toxins, Drs. Teissier and Guinard discovered that inanition had for effect to augment in a marked degree the resistance of animals to the particular toxins experimented with. They found, for example, that the action of the toxins of the pneumococcus and of the diphtheria bacillus was strikingly modified when injected into animals deprived of food. In these animals the initial symptoms of intoxication supervened much later than in the control animals, and in some, indeed, were indefinitely postponed. Experiments carried out on twenty-two animals, four of whom had been half starved, resulted in the survival of the starved animals, and the death of all the others. It was noticed, however, that the supervention of the delayed morbid symptoms in the starved animals was usually the signal for a prompt breakdown, their powers of resistance to the established disease having obviously been reduced by the deprivation of food. The *post-mortem* lesions in the starved animals were, however, invariably less extensive than was the case in the control animals."

This may be the case with inoculated animals, but it is certainly not the case that underfed human beings are less likely to catch diseases than those who are properly nourished.

THE HON. STEPHEN COLERIDGE AND THE
"LANCET."

On the 13th of March the *Lancet* published the following comments on the letters of Mr. Coleridge which appeared in the *Times* of March 8th* :—

A SUCCESSFUL SOCIETY!!

Mr. Stephen Coleridge, on behalf of a so-called "anti-vivisection" society, has written to His Royal Highness the Prince of Wales concerning "hapless dumb animals" in London "that daily and hourly are slowly cut up alive without even the pretence of anæsthetics." It is needless to say that any such proceeding is wholly illegal, and we are inclined to ask how it is that a society which has collected subscriptions from the public for many years past has not succeeded in convicting the criminals who are guilty of such atrocities. Mr. Coleridge is, we believe, a trained lawyer, and must know that "hearsay" is not evidence, and we hope that he would not venture to make such a statement to the Heir Apparent unless he believed he were prepared to justify not merely the general import but the letter of it. Mr. Coleridge appears to us to be on the horns of a dilemma. If he has knowledge of animals being "cut up alive without even the pretence of anæsthetics," he and his society are morally *particeps criminis* unless they make an attempt to obtain a conviction. If he has no such knowledge, he has attempted on inadequate ground to deprive the sick poor, whose welfare the Prince of Wales has so keenly at heart, of the stream of charity which is flowing towards them. But we take it that Mr. Coleridge has not succeeded in misleading anybody, and his amiable utterances will be regarded as merely due to poetic phrenzy gone sour. The anti-vivisection societies, by their intemperate and exaggerated statements, have gradually rendered the public immune to the poison which they are engaged in disseminating. They have never obtained a conviction for any offence against the Vivisection Act. They have not succeeded, happily, in arresting the legitimate pursuit of knowledge, and we venture to predict that this last utterance will have no influence whatever in lessening the contributions to the Prince of Wales's Fund. The Society for the Prevention of Cruelty to Animals can point with some pride to the successful crusade which it has forwarded. The anti-vivisection societies have had no solid success, and never can have any. One conviction would do more than millions of silly handbills and leaflets. The medical profession, equally with the public, would rejoice at the punishment of the perpetrators of the atrocities which Mr. Coleridge alleges take place daily and hourly. But until such conviction has been obtained we must continue in our belief that Mr. Coleridge's statement is absolutely devoid of any foundation whatever.

Mr. Coleridge replied in the *Lancet*, of March 20th, as follows :—

"A SUCCESSFUL SOCIETY!"

TO THE EDITORS OF THE "LANCET."

SIRS,—In an annotation in the *Lancet* of March 13th, dealing with my letter to the Prince of Wales on the subject of vivisection you say that to cut up animals alive without the pretence of anæsthetics in the laboratories attached to the London hospitals would be a wholly illegal proceeding; and you ask why we, who would protect animals from torture, do not attempt to get those who do these illegal acts convicted. My answer is that these acts, unfortunately, are not illegal. You must surely be perfectly well aware that attached to these laboratories are persons holding licences that exempt them from the necessity of using any anæsthetics whatever; and my legal training, to which you are good enough to allude, does not lead me to blame the anti-vivisection societies for not instituting prosecutions in these circumstances.

You seem to wish people to believe that animals are not cut up alive without anæsthetics in these laboratories, but before you can succeed in this it will be necessary for you to explain why all these vivisectors are at the pains to obtain licences year after year exempting them from the obligation to use

anæsthetics. According to the last Home Office report no less than thirty persons on the staffs of the London hospitals held these licences. Perhaps if there were fewer such vivisectors connected with these hospitals there would be more subscribers.

I am, Sirs, your obedient servant,
STEPHEN COLERIDGE.

Egerton Mansions, South Kensington,
March 14th, 1897.

To which the *Lancet* appended the following note :—

. It has been stated again and again, and is a fact within our own knowledge, that the only experiments performed without anæsthetics are inoculations and hypodermic injections. How can Mr. Coleridge justify the use of the words "cut up alive" as describing such proceedings?—EDS. L.

Mr. Coleridge then addressed the following letter to the Editors of the *Lancet* in reply to their note :—

TO THE EDITORS OF THE "LANCET."

SIRS,—In your note appended to my letter in your issue of the 20th of March, you state that the only vivisections performed in England without anæsthetics are inoculations and hypodermic injections; and you ask how I justify myself for using the words "cut up alive" as describing such proceedings.

My answer is, that if I so described mere inoculations, I should be guilty of gross exaggeration.

I put I used the words "cut up alive" in allusion to shocking vivisections lasting for hours and entailing atrocious suffering.

You say it has been stated again and again that it is only inoculations that are performed without anæsthetics. By whom are these statements made? By the persons themselves accused of cruelty? Such evidence is hardly conclusive.

But you say you know, within your own knowledge, that these statements are true. How can that be? Your knowledge of what takes place at times when, and places where, you are not present can only be founded upon hearsay evidence tendered you by the very persons whose conduct is impugned, and you have given me your opinion of the value of hearsay evidence with which I entirely concur.

We on our side state that persons who hold certificates allowing them to vivisection without anæsthetics can by law inflict, and do in fact inflict, horrible tortures upon animals.

In making this statement, we do not rely only upon the obvious deduction that what may happen commonly does happen, although the whole history of the cruelty of man would fairly support that deduction; but we rely upon the published records of the doings of vivisectors as detailed by themselves.

On the 13th of March you asserted that it was illegal to torture animals without anæsthetics: in that you were entirely mistaken.

Now you assert that no torture actually takes place; in that also you are entirely mistaken. In the pages of the *Journal of Physiology*, you will find accounts of operations performed under curare alone (which, as all the world knows, arrests muscular movement only, but does not affect sensation, and is not an anæsthetic) lasting for hours, during which the animals were not only cut up alive, but had their cut nerves "stimulated by electricity."

Now, as you yourselves have told me that you would rejoice at the punishment of the perpetrators of such atrocities, I hope that after a perusal of the *Journal of Physiology* you will join us in our efforts to make those atrocities illegal.

I am, Sirs, your obedient servant,
STEPHEN COLERIDGE.

7, Egerton Mansions, South Kensington.

The *Lancet* did not print the above letter, but made the following remarks upon it :—

MR. STEPHEN COLERIDGE.—If our correspondent knows that being licensed to do some things certain investigators have done other things, he is clearly remiss in not bringing them to account. We do not believe his statements. His letter practically reasserts what we have already contradicted,

* These letters were reprinted in our first leading article of last month's issue.

and our readers are in a position to judge between our correspondent's accuracy and our own.

To this Mr. Coleridge replied as follows:—

SIRS,—You have paid the highest compliment in your power to the arguments in my letter of the 23rd of March, for in your issue of to-day you suppress the letter and then misrepresent its contents.

I never said that anybody had done things they were not licensed to do. I said that being licensed to do them, they did do them.

"Words mean what they do mean and not other things," and my words were clear.

Those who support vivisection are wise to avoid legitimate controversy, for if they venture into that arena they are lost.

They cry aloud and call their adversary names, which is easier than answering him, but it does not advance truth, and is not a very scientific method.

Hysteria is not argument. Should you, however, at any time take heart to argue the question with fairness and courtesy, I shall be ready to meet you in a like spirit.

I remain, Sirs, your obedient servant,

STEPHEN COLERIDGE.

7, Egerton Mansions, South Kensington,
27th of March, 1897.

The *Lancet* printed this letter, appending to it the following note; the Editors, however, continued to suppress Mr. Coleridge's former letter:—

Mr. Coleridge has stated in a letter to the Prince's Hospital Fund, that animals "are slowly cut up alive without even the pretence of anæsthetics in many of the laboratories attached to those hospitals." The Home Secretary has stated in the House of Commons that the certificate allowing experiments upon animals without the use of anæsthetics is only granted for inoculations and similar trivial operations. "Words mean what they do mean, and not other things." How does Mr. Coleridge reconcile his words with truth? Hysteria is not argument.

Upon which Mr. Coleridge closed the correspondence with the following note:—

TO THE EDITORS OF THE "LANCET."

SIRS,—It is impossible to argue with editors who suppress their antagonist's letter and then deliberately misrepresent its contents. When you have printed the suppressed letter and thus have given your readers an opportunity of judging of your fairness in controversy I shall be happy to continue the discussion.—Your obedient servant,

STEPHEN COLERIDGE,

7, Egerton Mansions, S.W.
April 3rd, 1897.

THE PASTEURIAN PROGRESS. THE SAD DEATH IN PARIS.

We briefly reported last month the death of M. Médéric Davoust, of Livry-sur-Orthon, France, a man of sixty, who had been bitten by a dog, sent to the Pasteur Institute and put through the treatment, returned home as free from danger of evil, had been seized with symptoms of hydrophobia, returned to Paris, and died. From the *Petit Parisien* of March 20th, we learn further particulars. It appears that on the 15th January last, a dog, afterwards certified to be suffering from madness, ran through several places in the canton of St. George-du-Vivère, department of the Eure, biting on its way six different persons. Among these was M. Davoust, who was bitten on the left hand, and he, along with the others, arrived in Paris on the 19th of January, and on the 20th commenced a course of the Pasteurian treatment. This was continued for eighteen days, at the end of which time M. Davoust and his companions returned to their homes. It was not long, however, before the unfortunate man experienced severe pains in the left arm and shoulder. Much alarmed, at the instance of his wife, who accompanied him, he returned to Paris for the purpose of consulting again the Pasteurian authorities. They arrived at an hotel in the Rue

Vaugirard on Wednesday, March 17th, where the man died in a terrible paroxysm the same night.

DEATH OF AN ENGLISH PATIENT.

The *Manchester Guardian* of the 30th of March, recorded the death of another English patient, the facts being as follows:—On December 11th, 1896, Mrs. Thompson, a widow, residing in Railway Avenue, Reddish, was working in a church near Midland Street, when she heard smothered cries and saw her son, aged four years, in a sitting posture in the street with a collie dog on the top of him. The animal ran away, and Mrs. Thompson then found that her boy had been badly bitten in several places. She took him to a neighbouring surgery, where the wounds were cauterised, and subsequently she accompanied him to the Pasteur Institute at Paris. He was under treatment there for three weeks, and up to Wednesday, March 24th, seemed to be going on well. On the evening of that day he began to ramble in his talk, and complained of the hand that had been bitten. He was seen by two doctors, and on the Friday evening was taken to the Crumpsall Workhouse Hospital, where he died early the following morning.

SUFFERING FROM THE TREATMENT TWO YEARS AFTER.

An extraordinary case is reported from Glasgow, the facts of which are official. We take the information from the *Glasgow Evening News*, of the 22nd of March:—"The following report of the sub-committee on the case of Robert Philp appears in the minutes of the Health Committee of the Corporation Police Department:—Referring to the minute of the Health Committee, of date 29th September last, regarding a letter of date 17th September, 1896, from Mr. Robert Philp, 537, Garscube Road, explaining that, as the result of the medical treatment received by him in Paris, whither he had gone in December, 1894, at the expense of the Corporation, for treatment at Pasteur's Institute for a bite from a rabid dog, he had been unable to work for some considerable time, that it would be several weeks before he would be able to do anything, and that even then the work would require to be of the slightest kind, and, in the circumstances, claiming that some aliment or allowance be granted to him, and remitting the same to this sub-committee without prejudice, and without admission whatever of legal liability in the matter, for consideration and report. Dr. Chalmers now submitted another letter from Mr. Philp again calling attention to his case, and stating that he had not yet recovered from the effects of the treatment. The sub-committee having considered the matter, and heard the clerk and medical officer of health thereon, agreed to report that they could not see their way to recommend any aliment or allowance to be given to Mr. Philp."

REPORT ON HYDROPHOBIA.¹

By CHARLES W. DULLES, M.D., OF PHILADELPHIA.

We have only lately received a copy of this important paper:—

During the time that has elapsed since the last meeting of this Society I have collected accounts of fifteen cases of what was called hydrophobia in the United States. Of these there were: Males, 10; females, 5. The ages ranged from three years (two cases) to eighty-three years (one case). The animals to which the disorder was ascribed were: In thirteen cases, dogs; in two cases, cats. The incubations varied from three weeks to six months. Four of the deaths followed bites of dogs unsuspected of having rabies. Of the fifteen cases, one was doubtless due to drink and uremia; one was considered to be hysteria at Bellevue Hospital, and died soon afterward under the care of the New York Pasteur Institute; three were plain lyssophobia (one dying in the New York Pasteur Institute), and one "mewing like a cat" (a cat-bite case).

The pernicious use of strong narcotics is notable in the treatment of many of the fifteen cases I have collected and the apparent uselessness of cauterizations with silver nitrate.

¹ Read by title before the Medical Society of the State of Pennsylvania, at Chambersburg, May 23, 1895.

I have, since we last met, made a study of my records for five years of what I have labelled "mad dog scares" in my notes. The result of this study indicates that in fifty-five instances of alarms about mad dogs, with a record of one-hundred-and-seventy-five persons (of all ages) bitten, I have found only three² deaths from so-called "hydrophobia." This, if correct, would indicate that the natural mortality from the bites of rabid dogs is 1: 58, or less than 2 per cent. The vast majority of the deaths attributed to hydrophobia have followed bites by unsuspected dogs, and very few have followed bites by dogs that ran amuck and that excited alarm at the time. It is a very curious fact, taken in connection with this one, that a very large number of the deaths from so-called hydrophobia follow the bites of dogs that had no history or appearance of any disease.

The number of cases for the past year is about what I have before reported for other years. The total probably does not include all the cases that have occurred in the United States; but I think that it represents the actual figures as accurately as the statistics attainable in other countries, without government assistance in the work of collecting statistics. Against this number of actual deaths we may set the absurd claims put out by Pasteur Institutes of so-called "cures." Last year the Institute in Paris treated 1194, all supposed to be liable to die of hydrophobia; and these figures will probably be used to support the assertion, copied into books all over the world, that Pasteur has reduced the mortality from hydrophobia to less than 1 per cent. of those bitten by rabid animals. It is astonishing and disheartening to find men occupying responsible professorial positions who fail to see the utter fallacy of such claims or to appreciate the wrong they do by accepting and approving them.

This suggests a thought in regard to treatment; and, first, the treatment of the bite. I am strongly opposed to the practice of cauterizing with silver nitrate, which has been an article of faith ever since it was used and recommended by the English veterinarian, Youatt.

I have seen and treated very many dog-bites, and have not used lunar caustic for thirteen years, and no person that I have treated has yet developed hydrophobia, so that the mortality of those treated by me is less than that of those treated in Pasteur Institutes. My treatment is simply thorough surgical cleansing and the application of a simple antiseptic dressing for a few days, with the positive assurance that there will be no danger of any disease.

BRISTOL AND WEST OF ENGLAND ANTI-VIVISECTION SOCIETY.

ANNUAL MEETING.

On Saturday afternoon, the 3rd of April, the 14th annual meeting of the Bristol and West of England Anti-Vivisection Society, one of the most flourishing branches of the Victoria Street Society, was held at the Blind Asylum Hall, Park Street.

Mr. J. STORRS FRY, president of the Society, occupied the chair. He did not feel, he said, as time went on, any the less persuaded of the importance of the subject or of the sound basis on which the Society stood. The vivisectionists had to prove their case against moral sense. It was not the end proposed but the means which they had to consider, and even a good end did not justify wrong means.

The Rev. Canon TETLEY, chairman of the Executive Committee, then presented the annual report and statement of accounts. The report stated: Although year after year we have much the same work to report, and we seem in moments of discouragement to stand much where we did twelve months before, yet there are unmistakable signs that the country is beginning to awake to the knowledge of the dreadful thing which is in its midst, and a desire is growing that it may be put an end to. These signs should stimulate us to increased energy. A circular letter was again sent to every branch of the Women's Liberal Association, asking that they would bring the question of vivisection up at their federation meet-

ings in May. There was a very stormy discussion at one of these meetings, Mr. Victor Horsley speaking in favour of vivisection, but in spite of that a resolution condemning vivisection was carried by a large majority. In June an appeal was sent to the clergymen and ministers of all denominations in Bristol, asking them to preach a sermon on "the duties and responsibilities of man to the lower animals," if possible including an earnest deprecation of the practice of vivisection, and in response to this appeal between sixty and seventy sermons were preached. During the year there had been some correspondence with the Chancellor of the Exchequer on the subject of vivisection, and a memorial was sent to him from the Society showing the inadequacy of the inspection and some other points in the working of the Act, which he promised to lay before his colleague, the Home Secretary. Since the last report, the International Provisional Council of Anti-Vivisection Societies had been formed, to which a delegate was sent. Amongst other work this council had done a great deal in Chelsea by starting the Protest Committee, which had worked indefatigably against the licensing for vivisectional experiments of the Institute of Preventive Medicine on the Chelsea Embankment. They sent a petition against this to both Houses of Parliament, signed by 183,707 persons. At present we are convinced the funds for carrying on the work are provided by comparatively few friends of the cause, and though we are very grateful to them for their generous support, we feel that it is an unsatisfactory basis to rest upon, and we should be glad to see a large number of small subscriptions added to our list. Those friends of the cause who have not large means or much time to devote to the work, could help greatly if they would undertake to collect a small sum yearly. Much useful work has to be left undone for the want of such help. We cannot close this report without recording our sense of the irreparable loss which we have sustained in the death of our valued friend and fellow-worker, Rev. David Wright. The good sense, wise judgment, and temperate language which he brought to the work, will be long missed and mourned by the members of our committee." The financial statement showed a balance due to the treasurer of £22 18s. 3d.

Mr. T. A. WILLIAMS, in presenting his report as agent to the Society, said: "The past twelve months has seen me lecturing in many of the large towns of England, and I have addressed about 300 meetings, some of which have been very largely attended. Early in the year I undertook for your committee a series of meetings in the West of England, and delivered addresses at Plymouth, Downton, Truro, Camborne, Redruth, Falmouth, and Penzance. These meetings were of a most encouraging nature, by showing plainly the increased interest in the question of morality to animals. The Victoria Street Society, with the consent of the Bristol committee, placed in my hands a campaign in the Midlands and North of England. During this work I addressed ninety meetings and distributed many thousands of pamphlets. I received a very gratifying expression of appreciation from the Victoria Street committee for the work done during this period. Believing, as I do, that the highest morality and the truest science are not opposed to each other, I welcome such a statement as that made by Dr. J. Rose Bradford, the well-known vivisectionist, who, addressing the students at University College, was forced to admit that "the value of physiological knowledge to the practitioner was not so great, since so much current physiological teaching ignored human physiology in its relation to medicine, and the science was taught from the standpoint of the pure physiologist." This is only saying in scientific language what the opponents of vivisection have urged in their pleadings against the cruelty and uselessness of the practice. Professor Lawson Tait, writing in reply to a question I had asked him as to the truth of a statement made by a well-known public speaker, to the effect that by experiments upon animals some operation in surgery had been discovered, wrote on August 15th, 1896, that "in the whole realm of surgery there was no operation of which this could be said."

Mr. SOMERVILLE WOOD, of the Victoria Street Society, moved the adoption of the reports. He mentioned that he was taking the place at short notice of his friend Mr. Ernest

² Of these two were reported as dying of wounds received while killing dogs supposed to be rabid, when a large number were slaughtered; one was a child, who died, while the dog did not—so far as was known.

Bell, and went on to say that any man with a spark of humanity in him must say vivisection was cruel, and therefore wrong. Even vivisectors themselves allowed that if you viewed vivisection apart from utility it was morally wrong, and the plea of utility did not turn wrong-doing into right-doing. As to the claim of the vivisectors that they worked for the purpose of alleviating human pain, there was another side of the question. There were to be placed on the debit side not only the ghastly sufferings of the animals, but all the experiments that had failed, and the vivisectors admitted that there were a large number of failures. Then there were also the terrible sufferings of human beings who had to contemplate the horrors of vivisection, the immoral effect that it must have on people who practised it and the terrible wrong-doing to patients in the hospitals, which had to be put on the debit side against the question of alleviation of pain. If he were a millionaire he would not give one penny to the Prince of Wales's fund for the London Hospitals, for there was not a single one of them that was not tarred with the vivisection taint, and this, notwithstanding that he yielded to no one in his loyalty to the Queen. In lieu of this means of celebrating the diamond jubilee they proposed to build a hospital which would have attached to it no laboratory for vivisection, and he appealed for funds on its behalf.

The CHAIRMAN said that the remarks of Mr. Wood did not apply to the Bristol hospitals.

Mrs. NICHOLETTS seconded the adoption of the reports, and urged the need of further aid towards the Society's funds, stating that in a city of the size of Bristol the subscriptions should be double what they were.

The reports were adopted.

The HIGH SHERIFF (Mr. J. C. Colthurst Godwin), advocated the teaching in a simple manner of the ideas of anti-vivisection. He thought that cruelty could be remedied to a large extent by the use of anæsthetics. If they condemned vivisection *in toto* as impracticable, he must part ways with them. He moved the election of the following executive committee:—Chairman, Rev. Canon Tetley; Mr. W. Adlam, Mrs. Adlam, Miss Colby, Mr. J. L. Daniell, Miss Evans, Mrs. Henry Pedden, Miss Fowden, Miss Garnett, Rev. J. MacIldowie, Miss Marriett, Mr. R. A. Milner, Capt. Nicholetts, Miss Priestman, the Ven. Archdeacon Robeson, Mrs. Robeson, Miss C. Tanner, Miss Blanche Tetley, and Rev. Urijah Thomas.

The Rev. URIJAH THOMAS said the moral aspect of their work was clear and definite. He did not mean to say that vivisectors were immoral and unmanly. It was a very different thing to condemn a false principle and to condemn those who for the time were led away by it. He did not agree with the moderate course of the High Sheriff, and he believed that vivisection was neither necessary nor right. He heartily seconded the election of the executive committee.

The CHAIRMAN said he had been informed that there was no vivisection laboratory in Bristol. He understood that licences had been granted for experiment.

Mr. T. A. WILLIAMS moved a petition to both Houses of Parliament showing that "your petitioners are opposed to the practice of vivisection as being an immoral and unmanly abuse of power."

The Rev. A. C. MACPHERSON seconded the motion. He contended that the present system of licensing vivisection and its inspection were nothing but a pure and simple farce. The number of experiments with anæsthetics was, he said, diminishing, whereas the number without anæsthetics was increasing. The motion was carried.

On the proposition of Captain NICHOLETTS, the Rev. JOSEPH WAIN seconding, a vote of thanks was accorded to the chairman.

REPORT OF THE CONGRESS OF 1896.

BUDA PESTH.

We are requested by Dr. Szalkay to announce that the Report of the above Congress is now ready, and that every society which sent delegates to Buda Pesth on the occasion of the Congress will receive a copy gratis. Other societies desirous of possessing copies may purchase them at two shillings each.

INOCULATION FOR RINDERPEST, ETC.

The following letter, signed "A. Goff," which appeared in the London *Echo*, on the 14th ult., contains information on several points of much importance:—

SIR,—Those of your readers who disbelieve in the new doctrine of salvation by corrupt inoculations will not be surprised to hear that a letter just received from Johannesburg says:—"The papers are denouncing Koch's inoculation for rinderpest as most fatal in its results." Further, I learn from the *Lancet* that Dr. Koch's new method of producing tuberculin is very dangerous; "indeed Professor Koch felt as anxious as if he had to do with an explosive substance, and points out that in making tuberculin on a large scale every care must be taken to prevent the bacilli from being scattered about." Finally, the *Lancet* has received a telegram from Bombay, from which it appears that "the Yersin serum treatment of plague has practically failed." All these pieces of information, taken together, go to prove that it would be wiser in all ways if our medical and scientific professors would devote their time and talents to destroying the causes of disease, instead of seeking immunity by inoculations of all sorts of diseased viruses.

DEATH OF A DOCTOR.—The *Times of India* (Bombay), announced on March 22nd, that Dr. Hyam, who was attacked by plague on the 14th instant, died on Saturday morning. He is stated to have been under the treatment of Dr. V. S. Divan of the Jain Hospital, and of Dr. P. N. Dowda, and to have been inoculated with the Yersin toxic serum.

SAD DEATH OF A EUROPEAN LADY.—Miss M. Catania, a near relative of Captain E. C. Barboro, Italian Consul in Bombay, died at Harkness road, Malabar Hill, yesterday morning, from plague. She was only ill a little over two days, and thirty hours after the attack she was treated with Dr. Yersin's serum. Symptoms of plague abated after inoculation, but the heart's action failed, and the unfortunate young lady succumbed. The greatest sympathy is felt for her relatives.—*Times of India*, March 25th.

THE PRINCE OF WALES'S HOSPITAL FUND.—The following resolution has been passed by the Committee of the Humanitarian League:—"That this Committee is of opinion that the institution of the Prince of Wales's Fund for London is likely to be a cause of more harm than good to the general community, if it is used as a means of postponing the much-needed public or municipal control of London Hospitals, and unless adequate guarantees are given that the sums subscribed to the Fund shall be administered wholly for humane purposes, and not for what is called 'the advancement of medical science' by experimentation on men or animals."

SLAUGHTER OF ANIMALS VERSUS THEIR VIVISECTION.—"You discuss this matter of vivisection as though I were troubled about the death of animals. I see no objection to the slaughter of animals for food. I see no objection to the slaughter of animals for medical purposes. Death comes to all animals as well as to human beings, and whether it is anticipated by a short space of time has always appeared to me somewhat immaterial. It is not death that moves my conscience, but cruelty, and under no law of God or man is cruelty justifiable. It is a thing that comes to us from hell. It is the great evil instinct of our race. Boys revel in cruelty, as you may be aware. The average lad, if he consulted merely his instincts, would prefer to spend his Saturday afternoons in torturing a frog rather than playing any game. I am confident that an enormous proportion of the vivisectors are actuated simply by a desire to enjoy cruelty. Science is merely the excuse they give to their consciences. You must be aware that many medical men revile vivisection, not from what you would call sentimental motives, but from scientific ones. Vivisection has led to much error—that is undoubted, and has been proved over and over again. That it has led to any useful result is disputed. Every victory claimed by one vivisector is disputed by some rival vivisector. Vivisection that is painless I hardly call vivisection, but I should not take the word of the vivisector that it was painless. I have not formed my views of vivisection from anti-vivisectionist pamphlets. I have never read any. What knowledge I possess on the subject has been derived from the works and the words of medical men who have studied it deeply."—*To-day*, April 3rd.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, SATURDAY, MAY 1st, 1897.

THE ANÆSTHESIA JUGGLE.

THE *Lancet* in its recent controversy with Mr. STEPHEN COLERIDGE boasts that "the Anti-vivisection Societies have had no solid success, and never can have any." By "success" we are to understand that "the Societies have never obtained a conviction for any offence against the Vivisection Act." This is, unfortunately, true, and is about the only trustworthy statement in the *Lancet's* disingenuous answer to Mr. COLERIDGE. The leading medical journal could afford to tell the truth in this particular instance because the persons interested in maintaining the right to vivisect hoodwinked the legislature at the passing of the Act so that in its operation, by ingenious juggling with provisos and the clauses relating to the use of anæsthetics, the experimenters were left free to do whatever might suit their purpose without infringing its terms. It is instructive to notice the change in meaning which the word "anæsthetics" has undergone since the passing of the Vivisection Act. Dictionaries of, say, twenty years ago, defined anæsthetics as substances "capable of rendering insensible by inhalation." At that time everybody understood the word to refer to chloroform, ether, nitrous oxide, or other inhalable drug or gas. When, however, it was found that the use of these interfered in many cases with the results of the experiment, it became necessary to dispense with them. How was this to be done without infringing the Act? True, the Act contains certain provisos which permit—under certificate from the Home Secretary—that where the use of anæsthetics would frustrate the object of the experiment they may be dispensed with during its progress, and as long after as it is necessary provided the animal be killed when the object is attained. By this proviso we learn the important fact that it is acknowledged that in some cases the employment of true anæsthetics would destroy the value of the research. The legislature, convinced of the truth of this, has made provision for it by granting licences leaving the experimenter free to inflict any amount of pain on his victims which he may consider necessary. We do not charge the vivisector with wanton cruelty; we do not allege

that he tortures for the sake of torturing; what we do say is that the spirit of the true experimenter urges him to begin and complete his research uninfluenced in the least degree by regard for the sufferings of the animals. He takes out a licence to do this with impunity; he tells us in the journals in which the results of his experiments are recorded by his own pen, that he does disembowel, dissect out nerves, lay bare the heart and other organs, and spend many hours in the work without using chloroform, or ether, or other true anæsthetic; yet his party and his apologists when charged with practising and defending cruelty, deny with forcible emphasis that cruelty is ever practised in English laboratories, and allege that all our charges are false, and our descriptions of their work grossly exaggerated.

But the vivisectors go further. To obviate the chloroform and ether difficulty, to avoid troubling the Home Secretary for a special licence to dispense with anæsthetics, they have, within the past twenty years, taken certain narcotic drugs such as morphia, atropine, and chloral and christened them "anæsthetics." We say nothing here concerning curare which is the most precious possession of every physiological laboratory; its properties and uses are too well known to our readers to need any description of them. We may safely declare that it is employed in all the more serious and prolonged vivisections, but as it is specially declared in the Act not to be an anæsthetic its employment requires a little jugglery. What we usually find in papers on experiments in the *Journal of Physiology*, is something in this style, "The animal having been anæsthetized with chloroform and morphia," etc., etc. The chloroform, in cases where it would interfere with the object of the research, would be merely a whiff to save appearances; the morphia could at best only benumb or partly stupefy the animal, but as it is one of the drugs now declared to be an anæsthetic, no action can be taken by opponents of vivisection because the experimenters would bring expert evidence to protest that morphia is a true anæsthetic. Quain's *Dictionary of Medicine* (1885) prepared the way for the new definition of "Anæsthetics," by its statement that "general anæsthesia is at present rarely obtained in any other way than by inhalation, although successful attempts have been made to induce the condition by subcutaneous and intravenous injections of chloral or morphia." "The only experiments performed without anæsthetics are inoculations and hypodermic injections," says the *Lancet*, and this story is industriously circulated wherever our question is discussed. If morphia and chloral are rightly described as anæsthetics the statement is approximately true, but "a lie which is half a truth is ever the worst of lies," and the worst of all the vivisector's lies is that which is employed so effectively to benumb the national conscience on this question of scientific cruelty. Our opponents may safely invite us to prosecute them. They can make this show of bravery with perfect impunity. "The Coward Science," protected by its environment of falsehood and

chicanery, knows very well that we could not in the present state of the law hope for a conviction.

What we can do, what we are doing so effectually as to alarm the vivisectioning fraternity, is to educate popular opinion in the knowledge of the animal torturers' work, and show how mean, how contemptible are the methods to which eminent men of science are compelled to descend in the attempt to shelter themselves from popular indignation and social ostracism, that they may pursue a method of research from which cruelty is inseparable, and which necessitates the resort to falsehood to mask it.

HOSPITALS, MEDICAL SCHOOLS, AND VIVISECTION.

A circular letter having been addressed, by direction of the Committee of the Victoria Street Society, to the members of the Council of the Prince of Wales's "Diamond Jubilee Hospital Fund," Mr. Henry C. Burdett, one of the members of that Council, replied by a letter to the Secretary on the subject. In this letter he stated that he had "been actively interested in hospitals of every class for nearly thirty years, and had resided in some of the principal hospitals of this country, metropolitan and provincial, with medical schools attached and without, during fifteen years of that period," yet he had never known a case of experimentation on patients, or of grants from hospital funds to a medical school where vivisection was practised. He therefore asked for "the names of all the hospitals (1) where the patients or any of them are treated as subjects for experimentation apart from the treatment of their maladies; and (2) the names of the medical schools attached to hospitals, which receive grants from the hospital funds, in which the practice of vivisection is carried on." He also pronounced it "ridiculous nonsense" for Mr. Coleridge to write to the *Times* and "describe laboratories attached to hospitals where hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics," and asked to be supplied with the names of the laboratories referred to.

The Secretary being temporarily disabled, the Hon. Stephen Coleridge, who was also directly attacked, on the 25th of March, wrote to Mr. Burdett as follows:—

Hon. Stephen Coleridge to Mr. H. C. Burdett.

SIR,—I have seen a letter of yours of the 15th of March in which you ask two questions of Mr. Bryan of Victoria Street. With the first I am not concerned, with the second I am. You want to know the names of the medical schools that have received grants from Hospital Funds? In the report of the London Hospital for 1896-7 you will find it stated that the school practically owes its existence to the Hospital Funds, as the cost of erecting the original building "which amounted to more than £10,000 was borne by the Governors of the Hospital," and on page 8 following the history of the school down to a later date, it appears that £15,000 more was "lent" by the Hospital to remodel the school buildings.

In an advertisement of this Hospital in the *Lancet* of the 13th of May, 1876, there appear extracts from the minutes of the meeting of the house committee which are quoted as follows:—"It was unanimously resolved that with a view to the improvement of the London Hospital Medical School . . . it be recommended to the governors that during the next three years the present grants to the College amounting to £290 be replaced by a grant of £2,000 per annum." Vivisection has certainly been carried on in that school erected, supported, and remodelled with money granted and lent out of Hospital Funds. I can also refer you in the case of Guy's Hospital to a letter issued by the Governors in which they say "The Governors have given very substantial proof of the interest they take in the school, by the expenditure of many thousands of pounds within the last few years." This was in October 1880, at which time three persons held licences to

vivisection in that school and one of them held an additional certificate dispensing with the obligation to kill the animal before recovering from anæsthetics. I dare say if you pursue your researches in this direction you will find evidence of a similar nature with respect to other hospitals without my assistance. In writing my letter to the Prince of Wales it did not seem to me unlikely that what had certainly happened in the past might happen in the future, and I asked for some pledge that this Jubilee Fund, at any rate, might not be diverted from the relief of human suffering to the promotion of animal torture. To many people this does not seem a very unreasonable request. I am sorry you should think it necessary to endorse the hysterical personalities of the *British Medical Journal*.

I remain, yours faithfully,
STEPHEN COLERIDGE.

7, Egerton Mansions, S.W.

Mr. H. C. Burdett to Hon. Stephen Coleridge.
The Lodge, Porchester Square, W.
27th March, 1897.

SIR,—I have to acknowledge receipt of your letter of the 25th instant. I will cause the statements in regard to the London and Guy's Hospitals contained therein to be thoroughly enquired into at once. I have, however, to point out that you have ignored the question I asked in my letter of the 15th instant which affects you. That question contains a request to be supplied with the names of the laboratories which you stated in the *Times* to be attached to hospitals where "hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics."

I am, Sir, yours faithfully,
HENRY C. BURDETT.

The Hon. Stephen Coleridge,
7, Egerton Mansions, South Kensington.

Hon. Stephen Coleridge to Mr. H. C. Burdett.
7, Egerton Mansions, South Kensington.
29th of March, 1897.

SIR,—I have received your letter of the 27th of March. Thirty persons on the staffs of the Schools attached to the chief London Hospitals, according to the last Home Office Report, held certificates allowing them to cut up animals alive without any anæsthetics whatever. They are distributed as follows:—

University	...	...	...	...	...	4
King's	...	...	...	...	...	3
St. Bartholomew's	...	...	...	...	...	10
Guy's	...	...	...	...	...	6
St. Thomas's	...	...	...	...	...	5
St. Mary's	...	...	...	...	...	2

If, nevertheless, you suggest that no cruelties take place, I must assume that you mean that nothing more than trifling inoculations are performed under these thirty persons' hands.

Now the pages of the *Journal of Physiology* are full of accounts of the most shocking vivisections, hardly any of which are performed under a better anæsthetic than chloral or morphia, and many under curare alone, which is not an anæsthetic at all;—vivisections lasting for hours, during which the cut nerves of the animals are "stimulated" with electricity. Here therefore we have the certain fact that inconceivable suffering is inflicted by English vivisectioners on "hapless dumb animals" together with the equally certain fact that thirty persons in London take out special certificates enabling them legally to inflict that suffering. Are we to suppose that the fortuitous contiguity of a hospital renders all these thirty vivisectioners different from their fellow vivisectioners whose laboratories have some building other than a hospital next door? What evidence have you that these particular vivisectioners having obtained these certificates only use them for inoculations?—none other than the evidence of the very persons themselves whose conduct is impugned!

Perhaps you will say that the inspector reports these thirty to be guiltless of cruelties. But that amiable man makes a similar report about them *all*, whether connected with hospitals or not, and therefore, with the *Journal of Physiology* before us, his report becomes waste paper; and indeed he can

hardly be expected to supply anything we can regard as "evidence" of what happens at times when, and places where, he is not present.

If seventy-seven people are seen going into a restaurant at supper time, if they stay there long enough for a hearty meal, and are observed to approach the cashier and pay the price of the repast, should thirty of them subsequently assert that, they each took no more than a glass of water, the burden of proof would lie with THEM.—I am, Sir, yours faithfully,

STEPHEN COLERIDGE.

Henry C. Burdett, Esq.

Mr. H. C. Burdett to Hon. Stephen Coleridge.
The Lodge, Porchester Square, W.
29th March, 1897.

SIR,—I have to point out that your letter of the 29th instant is no reply to mine of the 27th instant. It is certainly incumbent upon you to either supply the names of the laboratories which you stated in the *Times* to be attached to hospitals where "hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics," or frankly to withdraw that statement.

I am, Sir, yours faithfully,
HENRY C. BURDETT.

Hon. S. Coleridge,
7, Egerton Mansions, South Kensington.

The Hon. Stephen Coleridge to Mr. H. C. Burdett.
7, Egerton Mansions, S.W.
29th March, 1897.

SIR,—I have the honour to point out that my letter of the 29th was a courteous and patient answer of the most conclusive nature to your letter of the 27th. I have also to point out that I have taken some trouble to furnish you with facts relating to the financial connection between hospitals and laboratories which your thirty years of study had apparently overlooked. What properly is due, therefore, is not any withdrawal on my part, but some expressions of obligation on yours.

I am, Sir, your obedient servant,
STEPHEN COLERIDGE.

Mr. H. C. Burdett to Hon. Stephen Coleridge.
The Lodge, Porchester Square, W.
3rd April, 1897.

SIR,—In your letter of the 26th ultimo you state that the London Hospital and Guy's have Medical Schools attached to them, where vivisection is practised, that have received grants from Hospital Funds. The Treasurer of Guy's Hospital informs me "it is quite possible (though he does not know it as a fact) that prior to 1880 the Governors of Guy's Hospital did expend some of their surplus income arising from their estates on assisting the Medical and Surgical School with buildings." He can answer, however, that since 1882 "not one shilling of hospital money has been spent on School Buildings. The College and the new buildings have been built entirely out of moneys raised by the staff on the security of school fees." So much for Guy's Hospital.

As to the London Hospital, I refer you to Parliamentary Paper 330, being the last published return of "Experiments on Living Animals," which shows the number performed during the year 1895 under licenses, from which you will find that no such experiments were performed at this Hospital.

I have also to acknowledge the receipt of your second letter of March 29th. I cannot regard it as an "answer of a most conclusive nature" to my enquiries. You are said to have stated in a letter to the *Times* that in some laboratories attached to hospitals "hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics." You ask me to infer the accuracy of your statements. The charges of Mr. Bryan and yourself are of far too serious a character to be allowed to rest upon inferences, and I ask again for definite information as to:—

1. The laboratories attached to hospitals in which animals are slowly cut up alive.
2. The laboratories attached to hospitals in which animals are cut up alive without the use of anæsthetics.
3. The hospitals to which such laboratories are attached.
4. The names of all the hospitals where the patients or any

of them are treated as subjects for experimentation apart from the treatment of their maladies.

I am leaving England under doctors' orders for some weeks, but any reply addressed to Mr. P. A. Nairne 3, Crosby Square, E.C. will receive prompt attention.

I am Sir, yours faithfully.

HENRY C. BURDETT.

Hon. Stephen Coleridge.

The Hon. Stephen Coleridge to Mr. H. C. Burdett.
7 Egerton Mansions, South Kensington, S.W.
5th April, 1897.

SIR,—I have received your letter of the 3rd of April. The Treasurer of Guy's Hospital naturally confirms the information I gave you, including the date of my reference.

With regard to the London Hospital, the Parliamentary report No. 330 to which you refer me, states in its second paragraph, that "the names of all those 'licensed places' to which licensees were accredited, are given in the tables." The London Hospital Medical School was such a "licensed Place" during the period reviewed in this report. The report, therefore, in omitting as it does, this "licensed place" from its tables contains a gross error, and we may at once dismiss as utterly untrustworthy, a Parliamentary paper drawn up with such culpable carelessness, and the information I gave you, both as regards Guy's and the London Hospital, remains unshaken.

With regard to my assertion as to animals being cut up alive without anæsthetics, my position is simple and impregnable. Their own publications, to which I have referred you, prove that the vivisectioners in this country do slowly cut up animals alive without anæsthetics, and as long as they apply for and receive certificates for the purpose of cutting up animals alive without anæsthetics in the laboratories attached to hospitals, my Society will continue to assert that what they obtain licenses to do, they do do.

You complain that such assertion is only based upon inference.

If a man takes out a license year after year to drive a hansom cab, do you call it only an inference to assert upon that evidence that he does drive a hansom cab? We say with confidence that such evidence justifies anyone in calling that man a cab driver, and if a man takes out a license to cut up animals alive without anæsthetics it equally justifies us in calling him an animal torturer. The burden of proof lies upon the first man to prove that he does not drive a hansom cab, and the burden of proof lies on the second man to prove that he does not torture animals.

I have already supplied you with the names of the laboratories attached to hospitals in which persons are licensed to cut up animals alive as slowly as they like, and as often as they like, without any anæsthetics whatever, and inasmuch as hospitals are dependent for their support chiefly upon humane persons, it is not surprising that as the practice of vivisection has increased in these laboratories, the subscriptions have fallen away.

Your obedient servant,
STEPHEN COLERIDGE.

H. C. Burdett, Esq.

I sincerely trust your sojourn abroad will entirely restore you to health.

[No further letter from Mr. Burdett himself was received.—Ed. Z.]

CORRESPONDENCE.

A PROTEST AGAINST INTOLERANCE.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Will you allow me to draw the attention of your readers to a form of intolerance which I fear is too common. The "Lecture Fund" has enabled your committee to hold many public meetings, and there has been an increased activity of opposition to vivisection. If this work is continued it must bear fruit by bringing an enlightened public opinion to bear against the horrors of the practice. The intolerance of which I complain is that of some medical men who use their

influence to prevent as far as possible the discussion of the question, and two instances of recent occurrence might be cited to illustrate the means adopted. A little time ago a public meeting was announced at the Congregational Chapel, Derby, the Rev. Pandy Williams presiding. The chairman told the meeting that he had received four letters from medical men, protesting against the lecture being given; this, in spite of the fact that the bill invited discussion. Again, last week at a very large anti-vivisection meeting held at Liverpool, the chairman said he had received a protest against the meeting being held in the Hall of the Y.M.C.A. These are nothing less than attempts to intimidate chairmen against presiding upon such occasions, and quite un-English in their opposition to "free expression of opinion." When I have held evidence of unfairness, I have challenged those guilty of such conduct to maintain in set debate the righteousness of vivisection, and I have declared in public meetings at Derby and Liverpool that your committee would no doubt be able to find a medical gentleman to represent its views against any medical defender of the practice of vivisection. We claim to be heard in public; these attempts to stifle discussion by approaching the chairmen of meetings should be earnestly resented.—Yours truly,

T. A. WILLIAMS.

Bradford, April 7th, 1897.

HOME INTELLIGENCE.

BIRMINGHAM.

On the 17th of March, Mr. T. A. Williams, who had been working for some weeks in London, under the auspices of the Victoria Street Society, left for Birmingham, where he held a public meeting, previously arranged for, the same night. The room selected was at the King's Heath Institute, where Mr. J. E. Baker, of Edgbaston, presided. Major-General Phelps and Miss Richards (local hon. secretary) were also present.

The CHAIRMAN referred in strong terms to the futile cruelties committed by vivisectionists, and denounced the system.

Mr. WILLIAMS first dealt with the antiquity of vivisection, showing that it had been in use as a method of investigation for hundreds, and, perhaps, thousands of years. In support of the contention that vivisection was cruel, he cited from the medical journals of 1895, which showed that in its pursuit experimenters had done many shocking things.

General PHELPS moved a resolution as follows:—"This meeting protests against any of the money which is being subscribed by the nation to the Prince of Wales's Jubilee Hospital Fund being used for the support of vivisection, and earnestly requests the council for the management of the fund to take effective steps to prevent it from being contributed to any hospital which permits vivisection in any laboratory or medical school under its control."

Miss RICHARDS, in seconding, called attention to a printed list of the leading hospitals in London and the provinces where vivisectionists and pro-vivisectionists were on the medical staff, and the consequent danger there was to the patients attending them.

The resolution was carried, as was a vote of thanks to the Chairman.

BOLTON.

FORMATION OF A NEW BRANCH SOCIETY.

A public meeting in advocacy of the principles of the Bolton Anti-Vivisection Society was held in the Central Hall on the 26th of March, presided over by the Rev. Canon Doman, M.A., who was supported by Dr. Haughton (London), Lieut.-General Phelps (Birmingham), Mr. Sugden (Manchester), Revs. C. J. Street, M.A., LL.B., and W. L. Williams, Miss E. Wolfenden (hon. sec.), Mrs. R. Ashworth, etc. The attendance was moderate, the weather being unfavourable.

At the outset the Rev. C. J. STREET (Chairman of the Committee) announced that the Revs. J. H. Gibbon, B.A., E. Jump, T. Taylor-Evans, B.A., Miss Hardcastle, and Mrs. Herbert Phillips (of Macclesfield) had written regretting they were unable to attend. He also announced the officers of the society, who were as follows:—President, Col. Ainsworth, J.P.; vice-presidents, Mr. J. P. Thomasson, Canon Doman, M.A., and Mr. T. Walker, J.P.; chairman of Committee, Rev.

C. J. Street; treasurer, Mrs. Arthur Greg; secretary, Miss M. E. Wolfenden. The object was to secure the total abolition of the practice of vivisection.

The CHAIRMAN said they were met to expose and protest against a practice the very mention of which filled them with horror and indignation. They were there to ask whether the practice could be justified or defended. So far as he knew, the defence given for these cruel experiments was that they were indispensable to the advancement of science and medicine and the benefit of humanity. It was further contended that through anæsthetics the animals operated upon were rendered insensible to pain, and thus the charge of cruelty was met. With both of these answers he differed. The ground he took up was that no possible advantage to man could for a moment justify the practice. The evidence was conclusive and certain that a high degree of prolonged and terrible suffering was inflicted on animals by the practice. That was sufficient for vehemently and loudly condemning it. It was a shameful abuse of the power of man, and it was cowardly, selfish, immoral, and un-Christian to use the power we possess to torture. The dictates of our common humanity, and the precepts of our holy religion rose up and condemned it as appalling and horrible. (Hear, hear.) It was their duty to open the eyes of the people, to rouse public indignation, and labour on until this practice was made illegal and penal. Not until that was done, and God grant that it might be done, would they rest from their righteous crusade. (Applause.)

The Rev. C. J. STREET moved a resolution calling for the legal prohibition of the cruel and unjustifiable practice of vivisection in the supposed interests of experimental science. He gave instances of the cruelty exposed before the Royal Commission, and said if people liked to buy their lives at such a frightful price of suffering to animals he would tell them their lives were not worth it. (Applause.) He contended that the question ought not to be left in the hands of medical men at all to decide; it was a question of whether right or wrong was being done. Furthermore, physical considerations were not the highest in the universe. The god of health had become the subject of a new idolatry, and they were making a new priesthood of the medical profession. (Hear, hear.) He had the greatest respect for science and scientific men, but though knowledge was good, sympathy was a great deal better. (Applause.)

The Rev. W. LL. WILLIAMS, in seconding the resolution, pointed out that the very fact that anæsthetics were sometimes resorted to, proved that the experimenters recognised the obligation resting upon them to minimise the cruelty that undoubtedly existed.

Dr. HAUGHTON, in supporting the resolution, said he was sorry to say the scientific men opposed to the practice were in a minority, and vivisection was increasing. Dealing in detail with the question he narrated several of the extreme experiments conducted, and said some of the men who carried them out were actually patrons and supporters of the Royal Society for the Prevention of Cruelty to Animals. (Laughter.) He urged that it was not enough to place the practice under a faulty supervision and useless inspection, as at present, but a duty to agitate for entire abolition. (Applause.)

The resolution having been carried unanimously, Mr. SUGDEN, of Manchester, moved a resolution expressing pleasure at the formation of the Bolton Society, and commending its support to the sympathy of all friends of dumb animals. In the course of a practical address he said it was almost impossible to subscribe to a hospital in the kingdom where the practice of vivisection was not carried on. He described most of the experiments of the medical men as utterly useless, and said in most cases it was folly to argue from animals to men for pathological purposes.

Mrs. R. ASHWORTH seconded the resolution, and said it was a matter where doctors differed, and one which they ought to decide for themselves.

Lieut.-General PHELPS, President of the Birmingham working men's section of the movement, also supported the resolution, and said the doctors largely practised vivisection as a matter of advertisement. The reason for all the secrecy now observed was that public sentiment was against these experiments, and if they had to be done publicly they would not be tolerated. Through the failure of animal vivisection

the cry was now being raised for human vivisection, and an American doctor had claimed the right to have criminals, lunatics, and paupers handed over to the vivisectors. He advised them not to contribute to any hospital where vivisection was performed and held that it would disappear if they cut off the supplies. (Applause.)

The resolution having been adopted votes of thanks were accorded the speakers and chairman.

LIVERPOOL.

On Wednesday afternoon, March 31st, in the Gordon Hall, Blackburne Place, Hope Street, Mrs. Charles Mallet, of London, addressed the first of a series of four meetings in Liverpool denunciatory of the cruelty to living animals occasioned by performing experiments upon them. The second of the series was held in the evening, in the Lecture Hall, Everton Road. The third, which took place on Thursday afternoon, April 1st, was a private one, and the fourth, a public meeting, was held the same evening, in the Young Men's Christian Association Hall, Mount Pleasant, under the chairmanship of Mr. Alex. Guthrie. Besides Mrs. Mallet, Mrs. Egerton Stewart-Brown, the Rev. W. J. Adams, C. F. Aker, C. R. Armstrong, etc., took part in the meeting. Miss Pernell, of Brougham Terrace, West Derby Road, has kindly undertaken the duties of hon. secretary, and will receive contributions to the cause.

The first meeting, in Gordon Hall, was attended by several ladies, Mr. J. W. C. Haldane presiding. The gentlemen present included the Revs. H. Wood and T. A. Howard, Mr. J. Sumner, Mr. T. A. Williams, etc.

Mrs. Mallet spoke of having the sympathy of Archdeacon Taylor, Canons Major Lester and Woodward, and others, but neither of these gentlemen was able to attend. She said that Liverpool was full of medical schools, yet destitute of a society to protect the victims of those medical schools. They had a society which prevented cruelty to animals, yet it did not prevent vivisection. The object of holding these meetings was to form a nucleus of those who felt that they were responsible for their more helpless fellow creatures. Why were they saying so much just now on this subject? Because at this moment an attempt was being made to establish in London an institution resembling the Pasteur Institute in Paris. The place was built on the Chelsea Embankment, but it had not yet been licensed. And why had the Home Secretary not licensed it? She believed it was the force of public opinion which had hitherto checked it. Experiments on living animals were increasing by leaps and bounds, and yet vivisection was not more cruel than it was useless. In support of this assertion she cited evidence, going into much detail on the subject.

A resolution in favour of the sentiments expressed was unanimously adopted, and Mrs. Mallet was cordially thanked.

The public meeting held in the evening in the Lecture Hall, Everton Road, was presided over by Mr. Edward Carpenter, and was numerously attended. The information communicated by Mrs. Mallet regarding the cruelties and uselessness of vivisection appeared to arouse indignation, and as a result an anti-vivisection resolution was carried enthusiastically. As in the previous meeting in Gordon Hall, many subscribed their names as adherents.

As already stated, the meeting in the Young Men's Christian Association Hall was held on the evening of Thursday, April 1st, under the presidency of Mr. Alexander Guthrie. There were also present, in addition to Mrs. Charles Mallet, of London, Mrs. Egerton Stewart-Brown, the Revs. Theodore Howard, E. M. Hoare, R. A. Armstrong, etc. Letters of apology had been received from Father Harris, the Rev. W. J. Adams, and others.

The CHAIRMAN, in opening the proceedings, mentioned that a certain measure of criticism had been addressed to himself as an officer of the Young Men's Christian Association in regard to the meeting being held in that room. The criticism came from medical quarters, and he had replied to it that he did not recognise its validity. (Applause.) The Lecture Hall had been let for the purpose of that meeting, and it might be let next week to give the opposite party an opportunity of expressing their views. (Hear, hear.) Although the meeting was held there, the Young Men's Christian Association

became in no way identified with one side or the other on the question. On his own account he would like to add that a movement which had for its aim kindness to and protection of weak and helpless creatures, and which included amongst its advocates multitudes of noble-hearted men and women, did not appear to him to be a movement which ought to be excluded from the Young Men's Christian Association. (Hear, hear, and applause.) His own position there was an uncommitted one; he had not studied the subject, and he explained clearly when invited to preside that he was uninstructed upon it. Like every other person present, he wanted to find out the real truth of the matter, free from overstatement by the one side or the other. In addition to the texts of those to address the meeting, he would offer them one contained in a letter from one of the most respected members of the medical profession, Dr. Caton. Dr. Caton's letter contained the subjoined extract:—"No vice is so detestably, so utterly inexcusable, as cruelty, and yet it is the most common thing to hear accusations of the most inhuman cruelty against men of the greatest and most humane disposition, who are unselfishly labouring for the good of their kind. Those who have any real knowledge of the fact are aware that the infliction of pain on an animal is of very infrequent occurrence. . . . The taking of animal life, and even the employment of animals for domestic purposes has an element of sadness in it, but it is hard to see how one is to do otherwise. If it is lawful to kill oxen, sheep, birds, and fish for food, and to drive horses by the compulsion of the whip and bit, it is surely right to sacrifice a comparatively infinitesimal amount of life in the effort to save mankind, and all the races of animals from wholesale disease and suffering."

The Rev. R. A. ARMSTRONG moved:—"That in view of the fact that a section of the medical profession declare the practice of vivisection to be useless, and seeing that it is morally indefensible, this meeting entreates her Majesty's Government to refuse to grant a licence for vivisection to the Chelsea Institute for preventive medicine, and advocates the total prohibition by law of experiments on living animals." In the course of his remarks he asserted that very little good had been done by vivisection, while it had resulted in colossal, unimaginable suffering to the animal kingdom. (Hear, hear.) It inured the student to the disregard of suffering, and therefore if it could be shown directly that considerable benefit had accrued to the human subject from the vivisection of the lower animals (and this could not be shown) probably human suffering would be enormously increased by the practice simply through the callousness which must ensue from its constant pursuit. (Applause.)

Mrs. Mallet seconded the proposition. She mentioned the receipt of two letters from the Bishop of Liverpool, who said he could not, at his great age, undertake any new work. She had asked him if he would give his name as president of the society in Liverpool, and his reply was that the animals had no better friend. Mrs. Mallet, in the course of an earnest address, mentioned the case referred to by the previous speaker of a nurse in University College Hospital, London, who had pointed out that the howling of dogs in the adjoining laboratory disturbed the dying and sick people under her charge, and it seemed to her (Mrs. Mallet) that the way in which the nurse was silenced did not speak well for the vivisectors. Mrs. Mallet again adduced a large amount of medical evidence to show that the practice of vivisection was useless for the purpose for which it was undertaken, while it enacted untold cruelties.

Mrs. EGERTON STEWART-BROWN, in supporting, said that as a Liverpool woman she wished to come forward and take her stand on this subject. She was lately talking regarding it to a vivisector, who said, "If you take your stand on the ground of morality, I cannot argue with you." She asserted that it mattered not whether doctors held that vivisection was necessary or not, she held that they had no right to torture their sentient fellow creatures for any supposed benefit to ourselves or humanity at large. This was the ground on which she stood, and she submitted that it was unassailable: they had as much right to decide moral questions as any doctor. (Hear, hear, and applause.) Among other things, she stated that as the inspectors of institutions licensed for vivisection were chosen from among vivisectors themselves,

their reports were not likely to be very unfavourable. (Hear, hear.) Liverpool people were extremely grateful to Mrs. Mallet for coming and enlightening them on the subject. (Applause).

Questions and discussion were invited, and the resolution was carried with acclamation.

Votes of thanks to Mrs. Mallet and the Chairman closed the proceedings.

DORCHESTER.

Mrs. Thomas Hardy, wife of the novelist, held a drawing-room at her house, Max Gate, Dorchester, on Saturday afternoon, March 27th. The Rev. Thomas Perkins, M.A., F.R.A.S., Rector of Turnworth, Dorset, attended and addressed the gathering on the vivisection question, pointing out that the practice could not be defended on moral grounds, and that, so far as its utility to medical science was concerned, many able medical men absolutely denied that any beneficial results had accrued, but rather, that much fallacious teaching had arisen based on experiments on living animals. Mr. Perkins quoted authorities in support of his contentions. Literature was distributed, and Mrs. Hardy heartily thanked for her sympathetic interest and kindness in summoning the meeting. The campaign will be actively though quietly pursued, the great majority of persons in the Dorchester district being absolutely ignorant of the facts of the case.

ST. ALBANS.

Continuing the controversy which has been raised against vivisection in this place, Dr. Berdoo sent the following reply to Mr. Fraser's address, reported in our last issue, to the *Herts Advertiser*, the editor of which journal published it on the 20th of March:—

SIR,—Although Mr. Fraser's lecture is termed "A reply," and was in some sort an answer to a few comparatively unimportant passages in my address on vivisection delivered a few weeks ago, my grave charges against English vivisection as founded in cruelty and maintained by falsehood were adroitly left untouched by Mr. Fraser. I proved by the writings of the vivisectioners themselves that it is sheer hypocrisy to pretend that English vivisection is at all less cruel than the Continental practice. I showed that in the words of Mr. Stephen Coleridge in his letter to the Prince of Wales, that hapless dumb animals in London are "daily and hourly slowly cut up alive without even the pretence of anæsthetics," and that such things are perfectly legal under the Vivisection Act. I exposed the use of curare in the laboratories, and I gave many examples of the fiendish cruelty of English vivisection. All this part of my lecture, amounting to 17-20ths of the whole, Mr. Fraser judiciously passed over in silence. I went to your city to prove the cruelty of vivisection, and to expose the false pretence that English experiments are more merciful than their foreign brethren. I proved my case, and Mr. Fraser, by his silence on these points, has admitted as much. On the controverted question of the utility of experiments on animals, Mr. Fraser did me the honour to make some reply, but had he proved that the practice I oppose had done more for the healing art than anything else in the world, it would not in the least affect my position that such awful cruelty to animals is, in the words of the late Lord Shaftesbury, "an abominable sin." Mr. Fraser said he did not approve of vivisection to gratify curiosity, but if the practice be lawful at all, such curiosity is laudable. The Royal Society originated in 1645 from a set of persons who were described at the time as "inquisitive into natural philosophy." The education of young practitioners would seem to be as good a reason for vivisection as anything else if a good reason for an immoral act is conceivable. All that I stated about the diverse action of poisons on animals and men was taken from the works of our most distinguished toxicologists, such writers as Dr. Sidney Ringer, Dr. Wood, Drs. Stillé, Maisch, and other well-known experimenters. They were not given on my own authority, but on that of experts in therapeutics. We were told a great deal about the value of tuberculin as a test for tuberculosis in animals, but the *Farmer's Gazette* of January 2nd, 1897, says that "tuberculin is not an absolutely perfect test," and Professor Brown in the report of the Veterinary Department of the Board of Agriculture says: "It has been

proved that one effect of inoculating animals with tuberculin has been in some cases that of distributing the tubercle bacillus to parts of the body not previously affected." All these points, however, are quite subsidiary. I could hold my own upon them all were I called upon to do so. My case against vivisection when I lectured at St. Albans was the awful cruelty of the practice, and I complain that Mr. Fraser, though ostensibly replying to me, left 17-20ths of my paper unanswered.—Yours, EDWD. BERDOO, M.R.C.S., L.R.C.P. (Ed.)

The St. Alban's Debating Society carried the discussion of the subject further at their meeting on the 19th of March, at their usual weekly meeting at the Clarendon Hotel, Chequer Street. There was a good attendance. Councillor R. L. Samuel (vice-president) occupied the chair, and there were also present the Rev. H. W. Taylor, J. Bell, F. Dunham, A. Bunce, Jeaffreson, E. A. Hulks, E. Watson, Frickers, J. Lee, A. Parkins, F. W. Dunham, W. G. Alderton, W. H. Roughsedge, S. Norman, J. Humphrey, A. C. Crane, J. J. Hayes, W. Savage, H. Savage, W. Westell, J. J. W. Rogers, J. Catton, J. Tomlin, F. J. Preece (hon. sec.), and others. The text of the debate was "Is any fact that science may disclose worth disclosing at the cost of cruelty and selfishness?"—Mr. JEAFFRESON opened the discussion in the affirmative, and in the course of his remarks said that to follow the contentions of those who urged that it was wrong to inflict pain on animals for the good of man, to its logical conclusion, they must not eat meat, as that could not be procured without inflicting pain. It had not been proved that vivisection had done no good, and he maintained that it was impossible to do that.—Mr. F. J. PREECE said, in reply to the remark as to eating meat, that he did not object to killing outright, but to horrible torture. They had no right to torture animals or individuals, and he felt that the intelligence of the nation would put its foot firmly down on such cruel practices. He pointed out that persons who conducted these experiments would have their feelings numbed by constantly having before them the sufferings of animals, and so he thought the experiments must have a bad effect on the sympathy of doctors.—Mr. W. H. ROUGHSEDGE remarked that he was unexpectedly able to be present that evening, as it enabled him to take part in the discussion of vivisection which in the past had led the medical profession into the commission of great errors. He pointed to the germ theory, and said germs were not the cause of disease, but a result. He maintained that all drugs did not have the same effect on man as on animals, and therefore that was not a safe guide. He urged that the results of vivisection were not at all commensurate to the pain inflicted on animals.—Mr. J. TOMLIN did not believe that vivisection was practised for the love of the thing. It had not yet been proved that vivisection had been fruitless. There was no other way of knowing the action of the various organs.—The Rev. H. W. TAYLOR said they could not, without having their feelings lacerated, endure an account of the horrors of vivisection, even if given by the perpetrators themselves. He considered that the onus of proof of utility rested with those that made the experiments. It might be interesting and very well in theory, but it had not helped towards human progress and allaying disease. Until he could see solid and definite results, he should take his stand on the side of protection for the dumb animals. Other speakers included Messrs. E. A. Hulks, J. J. Hayes, and F. Dunham; and Messrs. F. J. Preece and Jeaffreson having replied, the negative was carried by 19 votes to 11.

THE SCOTTISH SOCIETY.

MEETINGS IN EDINBURGH.

On the 9th of March a meeting was held at Lynwood, Craigmillar Park, the Rev. Robert Henderson presiding over a large attendance. Surgeon-General Watson delivered an address, after which the Revs. John Baird, L. F. Armitage, and Wm. Allan, M.A., James Sime, Esq., of Craigmont, Mr. Scott Moncreiff and Col. Waterston also took part. A number of questions were asked and answered.

The prayer meeting was held in the Bible Society's Rooms, 5, St. Andrew Square, on Tuesday, the 17th of March, when the Rev. William Allan presided and conducted the meeting.

A public debate on vivisection was held in the Hall of the Baptist Chapel, Rose Street, on Friday evening, the 26th of

March, under the auspices of the Young Men's Society. The Rev. W. Bardwell presided, and there was a good attendance. Mr. J. Foggs opened the debate by reading a paper entitled "A layman's view of vivisection," in which he reviewed the practice from various points and showed its uselessness to alleviate human suffering. Mr. Young took the side of vivisection, but failed to meet the arguments advanced by Mr. Foggs. A general discussion followed, and, while no vote was taken, the tone of the debate clearly indicated that the large majority were against the practice. Col. Waterston supplied all the members of the Society with literature bearing on the subject.

A meeting was held on Tuesday, the 6th April, at 49, Manor Place. Surgeon-General Watson presided and there was a good attendance. The Rev. John Baird gave an address reviewing the work of the past year, and showing that the signs were most hopeful in favour of the anti-vivisection movement. Col. Waterston also took part and the usual votes of thanks were awarded.

MEETINGS IN GLASGOW.

The monthly prayer meeting was held in the Protestant Alliance Rooms, Argyll Arcade, on Tuesday, 9th March, when the Rev. I. W. Mitchell presided and conducted the meeting.

A meeting was held at Hamilton Park Terrace, on Wednesday, the 17th of March, W. C. Maughan, Esq., J.P., presided, and there was a fair attendance. The Rev. John Baird delivered an address on the work of the past year, and the Rev. Dr. Kerr and Col. Waterston also spoke.

The annual meeting of the Glasgow Branch was held in the Protestant Alliance Room, Argyll Arcade, on Thursday, the 25th March. W. C. Maughan, Esq., J.P., President, occupied the chair, and there was a good attendance. A number of apologies from leading citizens were intimated. The Rev. Mr. Paterson having opened the meeting with prayer, Col. Waterston, Hon. Secretary, reported that during the year conferences had been held in Ayr, Dumfries, and other places, sermons had been preached and magic lantern lectures had been held in various places in Glasgow and district, and a monthly meeting had been held in Glasgow, as also the regular prayer meeting, all of which had been well attended. In reference to the anti-toxin cure for diphtheria a good deal of attention had been bestowed on the remarks of Professor Lister, and one remarkable thing, so far as Glasgow was concerned, was that Dr. Campbell Black had spoken out strongly on it, and also against the statements made by Professor Lister. Greater interest was now being taken in the work of the Society, and in Glasgow and all over the country great demand was being made for literature on the subject.—Mr. MAUGHAN said that the Glasgow Society was in a fairly good condition. He was sorry that medical men, for reasons of their own, had chosen to adopt a most hostile attitude towards anything that was being done to let the public know the real truth of the matter. They asserted that anyone who favoured the doctrine of anti-vivisection was retarding the cause of medical science. Nothing was farther from the truth. The Society was supported by eminent medical men when it asserted that the cause of medical investigation was in no way furthered but rather hindered by the cruel and atrocious practice of experimenting upon living animals. Last year 2,317 experiments of a cruel character were conducted upon living animals without any sort of drug being administered to lessen the pain. The greatest obstacle in the path of anti-vivisection was indifference, but they were doing all they could to dissipate that by extensively circulating literature in which the horrors of vivisection were plainly set forth. An instance of the uselessness of the practice of vivisection was the failure of Pasteur to invent a cure for hydrophobia, although experiments without number had been made upon living dogs and other animals. The young medical student was being indoctrinated with the views of those scientific vivisectioners who pursued their calling with revolting indifference to the suffering inflicted. (Applause.)—The Rev. JOHN BAIRD, from Edinburgh, then addressed the meeting and dwelt on the barren results arising from the practice of scientific cruelty to animals.—The usual votes having been awarded, the members took tea together, during which time a number of questions were put by those present.

The Scottish Society is arranging for a number of sermons

being given in various parts of the country during the summer months. A large amount of literature is also being distributed in many of the leading towns.

FOREIGN INTELLIGENCE.

INDIA.

DRS. YERSIN AND HAFKINE.

The *Bombay Gazette*, of March 12th, announced that five plague patients inoculated by Dr. Yersin died on the previous day, after receiving temporary benefit that seemed to promise recovery. In an "official statement," published on the following day, in the same paper, Dr. Yersin stated that, "It is necessary for the success of the treatment that the disease should be treated at its commencement," and with regard to immunisation by inoculation that "the length of the immunisation acquired by the injection of serum is about a month."

The *Indian Mirror* (Calcutta), of the 23rd of March, had the following very telling comments on the process of inoculation followed by Dr. Haffkine:—"Professor Haffkine is again to the fore. This time it is not the cholera but the dreaded plague, for which he claims to have got ready a sure and unfailing prophylactic. And he has already been inoculating people in the Bombay Presidency, with his anti-plague lymph, and as those who are panic-stricken all more or less go off their minds, many have submitted to the Haffkinian knife. It seems this Dr. Haffkine is accepted to be infallible by the authorities in India, for it is without any adequate inquiry or investigation into the truth of the professed virtues of his so-called discoveries, that he is freely permitted to experiment with them on the ignorant masses of this country, who see in Mr. Haffkine, he being a European, a representative of the Indian Government, and in his doings, the enforcement of the orders of that Government. The patronage accorded to the Professor by the authorities affords an additional instance of the heartless way in which the freedom of the people of this country is trampled under foot by the representatives of the Queen. The evil consequences of Mr. Haffkine's anti-choleraic inoculation are well-known to our readers, but what has been the effect of this renowned Professor's anti-plague inoculation? Our brethren in Bombay are now too distracted in their minds to inquire into its result, and, perhaps, we shall never hear what failures, what disasters have attended it. Cholera has been raging as furiously as ever, though Mr. Haffkine inoculated thousands with his anti-choleric virus, and the plague, we may rest assured, will number its victims in the same enormously large numbers, as it has been doing, notwithstanding Dr. Haffkine's boasted discovery of a prophylactic for it, and his inoculating people with the same."

GERMANY.

RESURRECTION OF KOCHERY.

Some of the English newspapers of the 1st of April—appropriate day—published abstracts of a new paper by Dr. Koch, who, after further experiments on patients as well as animals it is admitted, seeks to revive the lost credit of his tuberculin for the treatment of consumption.

There is always some drawback to these alleged discoveries, and the concluding lines of the quotation we have given show that this alleged rehabilitation of Koch's tuberculin is no exception to the rule. With what caution and doubt the new claim of Koch should be received is well indicated in the following Berlin telegram which appeared in the *Standard* of the 9th of April:—

"The highest German medical authorities are doubtful of the value of Professor Koch's improved tuberculin—a natural consequence of the failure of the medicament in its original form. The well-known Munich bacteriologist, Professor Buchner, says that he cannot endorse Dr. Koch's opinion that nothing better than the improved tuberculin can be produced, until it has been comprehensively tested."

UNITED STATES.

CHRISTIAN TEMPERANCE WOMEN AND VIVISECTION.

The County Convention of the Woman's Christian Temperance Union held at Hudson, New York, February, 1897, unanimously passed the following resolution:—"That we endorse the efforts of the New York State Anti-Vivisection Society, for the prevention of cruelty to animals."

The Victoria Street and International Anti-Vivisection Society.

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17

THE TALE OF THE 358 DEAD.

[CORRECTED TO APRIL 20TH, 1897.]

IMPORTANT TESTIMONY AS TO THE ACCURACY OF THESE STATISTICS.

Q. 2057.—Was this supplement to THE ZOOEPHILIST of 21st [1st] July, 1887, giving details as to M. Pasteur's Necrology, before you when you were on the Pasteur Commission (handing the same to the witness)?—Yes, I think we had this statement before us.

Q. 2058.—Do you know whether it is accurate?—I believe it is; it seems to me to have been drawn up with great care.—Extracted from the Evidence of Dr. Lauder Brunton.—Report of Lords' Committee on Rabies in Dogs, 1887.

N.B.—It has been claimed on behalf of Pasteur that on dogs the success of his method was invariable. Had the analogy between dogs and mankind, therefore, been perfect, it should never have failed with the latter. It does fail, and so the experimental basis is discredited; but it is sought to rehabilitate it by saying that the average mortality is small. When persons bitten by dogs only suspected of being mad, and even those merely licked by dogs, are reckoned among the total treated, and a good many actual deaths are discounted, it is easy to make a low average. The honesty of the process is, however, another matter.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
INOCULATED IN PARIS.							
				1885:	1885:	1885:	1885:
1	Jacques Bonenfant... ..	Hospital Lariboisière, Paris ...	Dog	Aug. 30	Sept. 1	Sept. 7	<i>Journal de Médecine de Paris</i> , December 19 (1886.)
2	Louise Pelletier	Paris	Dog	Oct. 3	Nov. 9	Dec. 4	<i>Intransigeant</i> , December 8.
				1886:	1886:	1886:	1886:
3	Mathias Kakulev (or Kajoronoff)	Russia	Wolf	Mar. 1	Mar. 13	Mar. 23	Died at Hotel Dieu, Paris; <i>La France</i> , March 24.
4	Wladimir Phenogenoff (or Ivanoff)	Russia	Wolf	Mar. 1	Mar. 13	April 3	Died at Hotel Dieu, Paris; <i>Evénement</i> , April 4.
5	Peter Wasiliev Gollowinski	Russia	Wolf	Mar. 1	Mar. 13	April 7	Died at Hotel Dieu, Paris; <i>Intransigeant</i> , April 13.
6	Dimitri Borowskoff	Russia	Wolf	Mar. 25	April 5	April 20	Died in Paris; <i>Intransigeant</i> , April 22.
7	Ivanovna Schtcherbakoff ...	Russia	Wolf	Mar. 25	April 5	April 22	Died at Salpêtrière, Paris; <i>Petit Journal</i> , April 25.
8	A Woman (name unknown)	Wloclawek, Russia	Wolf	...	...	May 31	<i>Ami du Peuple</i> , June 6.
9	(Name unknown)	Russia	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
10	(Name unknown)	Russia (at Moscow)	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
11	Christin (aged 6)	Evian, Savoy ...	Dog	May 14	May 20	July 4	<i>Journal de Médecine de Paris</i> , July 18.
12	John Gagu (or Gager)	Roumania	Dog	May 11	May 25	June 7	<i>Daily News</i> , June 7.
13	(¹) Eloina Lagut (aged 11)	Dole, Jura	Dog	May 18	May 24	June 17	Exchange Company's Telegram, June 24.
14	A Woman (name unknown)	Russia	Wolf	...	...	July 6	<i>Lancet</i> , July 31.
15	(Name unknown)	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1.) Under
16	(Name unknown)	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1.) Dr. Winow's
17	(Name unknown)	St. Petersburg ...	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1.) care.
18	Marius Bouvier (adult) ...	Grenoble	Cat	Apr. 30	May 4	July 21	<i>Le Temps</i> , Paris, July 22—25.
19	A Boy (aged 13)	Dordrecht	Cat	June 18	June 25	Aug. 4	<i>Daily News</i> , August 10. (Paris correspondence.)
20	(¹) Peytel, Henri (aged 6)	Poleymieux, Rhone	Dog	June 28	June 30	July 17	<i>Le Petit Lyonnais</i> , August.
21	A Young Man	Gatchina	Dog	...	...	Aug. 10	<i>Novos Vremya</i> , Russian Journal, August 11.
22	(¹) Bergeron Clédière (21 mos.)	Bordeaux	Dog	June 17	June 21	Aug. 17	<i>Daily News</i> , August 18. (Paris correspondence.)
23	Josefa Pinta Santiago	Ferrol, Spain ...	Dog	...	...	Aug. 16	<i>Le Matin</i> , Paris, August 18.
24	A young woman (aged 14) ...	Reus, Spain	Dog	July 5	...	Aug. 20	Madrid correspondence, based on <i>La Epoca</i> .
25	Harry Collinge (aged 10) ...	Rawtenstall, Lancs.	Dog	July 6	July 15	Aug. 20	Manchester and London Journals, August 23.
26-8	Three Patients	Spain	Dog	...	...	Sept.	<i>Correspondancia</i> , Madrid, Sept.
29	(¹) Moulis Andre (6 years)	Paris	Dog	July 31	Aug. 6	Sept. 8	<i>Journal de Médecine de Paris</i> , November 7.
30	Zélie Leduc (70) ... ..	... ..	Dog	July 14	July 18	Sept. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
31	Louis Grand (41)	France	Dog	Sept. 5	Sept. 14	Oct. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
32	Duresset, Ed.	France	Dog	Aug.	Sept.	Sept.	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
33	(¹) Astier (2 years)	Paris	Dog	Aug. 4	Aug. 5	Sept. 16	<i>Journal de Médecine de Paris</i> , November 7.
34	Mathieu Vidian (8 years)	Villeneuve-d'Ornon	Dog	Feb. 24	Feb. 27	Sept. 24	<i>Le Temps</i> , Paris, October 2.
35	(²) Moermann, a Gamekeeper	Sarthe	Dog	June 28	Aug. 11	Sept. 7	<i>Le Patriote</i> , Brussels, September 14.
36	(Name unknown) Bitten by a dog the property of Prince de Lucinge	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3.) Admitted
37	(Name unknown)	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3.) by Dr. Chau-
38	(Name unknown)	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3.) temps, Sor-
39	(Name unknown)	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3.) bonne,
40	(¹) Magneron Norbert (18)	Talence, Bordeaux	Dog	July 25	Aug. 1	Oct. 12	<i>La Science Libre</i> , Paris, October 24.
41	Amélie Ozimska	Holbiele, Vladimir (Russia)	Dog	May	10th day	Feb., 1887	<i>Courrier de Varsovie</i> , February 17, 1887.
INOCULATED AT THE PASTEUR INSTITUTE, ODESSA.							
42	Mircslaff Panoff (14)	Odessa ... ..	...	...	...	Within four mths.	} <i>Novos Vremya</i> , September 14.
43	Tiasenko (10)	Odessa ... ..	...	...	...	...
44	Jean Nowogiloff (12)	Odessa ... ..	...	...	...	...
45	(Name unknown)	Inhabitants of {	...	...	...	Within 4 mths.	} <i>Novos Vremya</i> , September 14.
46	(Name unknown)	Kostroma {	...	...	...	...

(¹) Admitted by M. Pasteur or Dr. Chautemps. (*Journal de Médecine de Paris*, November 7.)

(²) Jamin, another man bitten by the same dog, but not inoculated, also died.—

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1886:	1886:
47	A Peasant, name unknown. (64)	Odessa	Wolf	...	...	July 7	<i>La Semaine Médicale</i> (quoted in <i>Lancet</i> , August 21).
48	Tyjnehu	Son Station-master, Lioubotinn ...	Dog	July 4	July 10	Aug 14	<i>Journal de Médecine de Paris</i> , November 14.
49	Paul Potailkin (7) ...	Odessa	Dog	June 27	June 30	Aug 15	} <i>Journal de Médecine de Paris</i> , October 17, and <i>Intransigent</i> , October 13.
50	Vassa Voropaïef (16) ...	Odessa	Dog	June 27	June 30	Aug 22	
51	Mirochwichenko	Kharkoff	Dog	June 20	June 28	Aug. 3	} <i>Daily News</i> , Odessa Correspondent, November 2.
52	Tlyinski	Odessa	Dog	July 7	July 7	Aug. 20	
53	Bolodinn (Simon)	Gagarinn	Wolf	June	June	Oct. 12	} <i>Novoë Vremya</i> and <i>Science Libre</i> , November 7.
54	Kushejow (peasant) ...	Odessa ... ..	...	...	July 15	Oct. 12	
55	Anastasia Bretschkow ...	Odessa ... ..	...	...	} 4 days after bite	} Oct. 14	} Dr. Kessler, St. Petersburg.
56	Popow	Belgorod ... ..	...	...	
				1887:	1887:	1887:	1887:
57	Man (25)	} Oster (Tscherni-gov)	} Wolf	} ...	} ...	} ...	} Submitted to the Intensive Treatment.— <i>Journal de Médecine de Paris</i> , August 28, 1887.
58	Child (10)						
59	A Man (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	} <i>Daily News</i> , August 30; from its Odessa Correspondent.
60	A Boy (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	
61	A Boy (name unknown) ...	Caucasia	Wolf	...	...	Aug. 28	} <i>Daily News</i> , September 12; from its Odessa Correspondent.
62	— (name unknown) ...	Caucasia	Wolf	...	...	Sept.	
63	— (name unknown) ...	Caucasia	Wolf	...	...	Sept.	
64	A Girl (12, name unknown)	Caucasia	Wolf	...	...	Sept.	
				1888:	1888:	1888:	1888:
65	Maxime Schilla	Sébastopol (near) ...	Dog	March	March	March	<i>Novoë Vremya</i> , March 27th.
66	Nasar Ossatschenko ...	Odessa	Dog	...	...	July	<i>La Paix</i> , Paris, July.
				1889:	1889:	1889:	1889:
67	Anton Monastersky ...	Kieff	Dog	May	May	May	<i>Odessa Zeitung</i> , June 2.
	INOCULATED ELSEWHERE IN RUSSIA.			1886:	1886:	1886:	
68	Arthur Stoboi (boy) ...	Lublin	Dog	July	August	Nov. 23	} <i>Riga Tageblatt</i> , December 21, 1886. The dog lived and appeared to be perfectly healthy. Inoculated at St. Petersburg.— <i>Journal de Médecine de Paris</i> , March 13, 1887.
69	Wassilieff (peasant) ...	Jakhnov (Pskow) ...	Dog	...	...	...
				1887:	1887:	1887:	1887:
70	— (peasant, 28)	Pavlovo	Dog	Feb. 24	Mar. 4	Mar. 20	} Dr. S. Warschawski, in <i>Russkaja Medicina</i> . This peasant died of paralytic rabies, contracted at laboratory.— <i>Journal de Médecine de Paris</i> , Oct. 23.
71	A Peasant (name unknown)	Kromy	Dog	July 25	July 26	Sept. 20	
72	A man (name unknown) ...	Circassia	Wolf	Aug. 1	Aug. 7	Sept.	} <i>Journal de Médecine de Paris</i> , October 23.
73	A Child (name unknown) ...	Circassia	Wolf	Aug. 1	...	Sept.	
74	A Child (name unknown) ...	Circassia	Wolf	Aug. 1	...	Sept.	
				1889:	1889:	1889:	1889:
75	(¹) W—, Helen (6) ...	Biela (Sjediz) ...	Dog	July 15	July 15	Aug. 9	Dr. Rodkewitsch, in <i>Russkaja Medicina</i> , September.
	Submitted to the Intensive Treatment.			1886:	1886:	1886:	1886:
76	Joseph Goffi, alias Smith (26)	Brown Institution, London	Cat	Sept. 4	Sept. 6	Oct. 20	} "His death was due to the virus of rabies."— <i>Report of Committee to Local Gov. Board</i> , 1887, p. vi. <i>Journal de Médecine de Paris</i> , March 13 (1887).
77	Rovati, Luigi (30) ...	Modena	Dog	Sep. 12	Sep. 20	Oct. 23	
78	(²) Clergeot-Moulin (27) ...	Paris	Dog	Aug. 7	Aug. 11	Oct. 24	} Died at the Tenon Hospital, Paris. <i>Le Science Libre</i> , Paris, November 14.
79	Edward, cabman (34) ...	Versailles	Dog	...	...	Oct. 30	
80	(³) Wilde, Arthur	Rotherham	Man	...	...	Nov. 3	} <i>Rotherham Advertiser</i> , November 6. Professor Peter (<i>Lancet</i> , January 15, 1887).
81	Sodini, B. (46)	Constantine	Dog	Oct. 12	Oct. 21	Nov. 24	
82	Rouyer, Arthur (12) ...	58, Rue de Bretagne, Paris ...	Dog	Oct. 20	Oct. 21	Nov. 26	<i>Journal de Médecine de Paris</i> , December 5, 1886.
83	Letang, père	Gourgeon	Dog	Nov. 3	Nov. 8	Dec. 8	} Professor Peter (Letter to, from Dr. Pitoy). <i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887.
84	Réveillac, Louis (20) ...	France	Dog	Nov. 4	Nov. 6	Dec. 21	
85	(⁴) Née, Leopold (42) ...	Arras	Dog	Nov. 12	Nov. 17	Dec. 17	<i>Journal de Médecine de Paris</i> , January 2, 1887.
						1887:	1887:
86	Jansen, Louis Victor (47) ...	Dunkirk	Dog	Aug. 19	Aug. 21	Jan. 1	} Professor Peter (<i>Lancet</i> , January 15). Professor Peter (Letter to, from Medical Attendant).
87	Gérard, Amédée (28) ...	Boran (Oise)	Dog	Dec. 1	Dec. 3	Jan. 3	
88	Goriot, Paul (14)	Paris	Cat	Nov. 30	Dec. 21	Jan. 15	} Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30. Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
89	Albert (woman)	Vallouise (Basses Alpes)	Dog	Dec. 20	Dec. 25	Jan. 5	

[NOTE.—The intensive method is abandoned about May or June, 1887.]

(¹) Other children bitten by the same dog and not inoculated, survive; the dog disappeared. (²) Admitted by M. Pasteur or Dr. Chautemps. (³) Dr. J. H. Clarke's opinion on facts as reported: Death not due to hydrophobia, but probably to Pasteur's inoculations, the symptoms not being those of any known disease. (⁴) The dog in this case was pronounced not to have been mad.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
					1886 :	1887 :	1887 :
90	Fonlup (30) ...	Tour du Pin (Isère)	Dog	Dec. 1	Dec. 12	Jan. 24	<i>Journal de Médecine de Paris</i> , February 6.
91	Bergé (40) ...	Bordeaux ...	Dog	July	3 days after bite.	Jan. 30	Dr. Pitres made the autopsy and declared that the man died of hydrophobia. <i>Journal de Médecine de Paris</i> , February 6.
92	Alphand (woman, 42) ...	Madeleine (Paris)	Dog	Dec. 13	Dec. 20	Jan. 30	<i>Journal de Médecine de Paris</i> , March 13.
93	Saintes (child) ...	Maison-Carrée, near Alger ...	Dog	...	...	Feb. 24	<i>Journal de Médecine de Paris</i> , March 13.
94	Chavagnac, Louise (13) ...	Arbe ...	Dog	Oct.	Oct.	Mar. 10	<i>Journal de Médecine de Paris</i> , March 20 and July 31.
					1887 :	1887 :	
95	Sans Ramon ...	La Siréna, Badajoz, Spain ...	Wolf	Feb. 15	Mar. 15	Mar. 20	Dr. Dujardin-Beaumetz. [Died under treatment.]
96	(¹) Ballasteros ...	La Puerta, Prov. of Jena, Spain ...	Dog	Feb. 9	Feb. 20	Mar. 24	} <i>El Resumen</i> , a Spanish journal, quoted in <i>Journ. de Médecine de Paris</i> , April 24.
97	A person (no name given) ...	Navas de San Juan (Jena), Spain ...	Dog	...	...	Mar. 26	
98	(¹) A woman (41) ...	Baeza, Spain ...	Dog	...	...	Apr. 23	
99	Ph. Hydram (56) ...	Sallèle, France ...	Dog	Oct. 5	Oct. 10	Apr. 17	
100	J. Hayden (8) ...	Thurles, Ireland ...	Dog	Apr. 16	Apr. 19	May 19	<i>Lancet</i> , June 4, and <i>Freeman's Journal</i> , Dublin, May 27.
101	Valentin, Emile (16) ...	Reherrey (France)	Dog	Feb. 22	Feb. 28	July 27	<i>Progrès de l'Est</i> , quoted in <i>Journal de Médecine de Paris</i> , September 11.
102	Pénichand (18) ...	Poulaines (Indre), France ...	Dog	June 12	June 14	Aug. 19	Dr. Bretheau (Valençay, Indre), in <i>Journal de Médecine de Paris</i> , September 4.
Under the Third Formula.							
103	Hurot, Paul (42) ...	Rue St. Bernard, Paris ...	Dog	May 29	May 30	July 4	<i>Figaro</i> , Paris, July 5.
104	Gachet, Jean Baptiste (25) ...	Vierzon (Oher) ...	Dog	Apr. 4	Apr. 10	May 2	} Dr. Lutaud, Editor <i>Journal de Médecine de Paris</i> . Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
105	Cipriano, Rosario (42) ...	Torretta, Sicily ...	Dog	Mar. 13	Mar. 18	May 7	
106	Bourgeot, Jules ...	Audigny (Aisne)	Dog	Apr. 24	Apr. 28	July 11	
107	Mangione, Andrea (82) ...	Palermo, Sicily ...	Dog	May 24	June 4	July 12	
108	Desclide (aubergiste) ...	Larochehoucauld (Charente) ...	Dog	May 22	May 23	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by Dr. Nadaud.)
109	Jeule, Jeanne M. (57) ...	Arcezac (Hautes-Pyrénées) ...	Dog	Mar. 27	Mar. 29	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by M. Courrèges.)
110	Cahill, Martin (29) ...	Templemore, Ireland	Dog	June 14	June 27	Aug. 14	<i>Standard</i> (and other London papers), August 18.
111	(²) Doneraile, Lord (69) ...	Doneraile Court, co. Cork, Ireland	Fox	Jan. 14	Jan. 26	Aug. 26	<i>Times</i> , August 27. <i>Journal de Médecine de Paris</i> , September 4.
112	Kirkham, Albert E. (5) ...	Lancaster ...	Dog	July 18	July 26	Aug. 27	<i>Daily Telegraph</i> , August 30. <i>Lancet</i> , June 16, 1888.
113	Cagarelli, Anna ...	Fiorano, Province of Modena ...	Dog	June 13	June 20	Sept. 12	<i>Roma</i> , Neapolitan newspaper, Sept. 17 (confirmed by letter from the Syndic of Fiorano, October 5).
114	(Name unknown) ...	Portugal ...	Wolf	...	...	...	} <i>Daily Chronicle</i> , London, September 23; from its Paris Correspondent. [The patients were treated in Paris.]
115	(Name unknown) ...	Portugal ...	Wolf	...	...	...
116	(Name unknown) ...	Portugal ...	Wolf	...	...	...
117	Padre Luiz ...	Cabanes, Portugal	Wolf	July 5	Aug. 2	Sept. 21	
118	(Name unknown) ...	Portugal ...	Wolf	...	...	...	} <i>Weekly Dispatch</i> , September 25; <i>Tablet</i> , October 8.
119	(Name unknown) ...	Portugal ...	Wolf	...	...	...
120	(Name unknown) ...	Portugal ...	Wolf	...	...	...
121	(Name unknown) ...	Portugal ...	Wolf	...	...	...
122	Jammot (woman, 38) ...	La Garenne ...	Cat	Aug. 3	Aug. 4	Sept. 24	} Dr. Hallade, in <i>Journal de Médecine de Paris</i> , Oct. 2.
123	(⁴) Lindley, Fred. (26) ...	Cumberworth, Huddersfield ...	Dog	Aug. 1	Aug. 6	Oct. 4	
124	Saulat, Georgette (5 years) ...	35, Rue de Chaux-fourniers, Paris	Dog	July 9	July 9	Aug. 4	<i>Journal de Médecine de Paris</i> , October 23.
125	Marchois (8 years) ...	Senlis ...	Dog	July 3	July 5	Aug. 16	<i>Journal de Médecine de Paris</i> , October 23.
126	Pliego, Joseph ...	Portugal ...	...	July	Aug.	Aug. 30	<i>Journal de Médecine de Paris</i> , October 23.
127	Palu, Eugénie (8) ...	Codalet, France ...	Dog	Sept. 1	Sept. 6	Oct. 10	<i>Journal de Médecine de Paris</i> , November 6.
128	Thierry, Paul (4) ...	Melleville, France	Dog	Sept. 1	Sept. 7	Oct. 15	<i>Journal de Médecine de Paris</i> , November 6.
129	Sintés, Edward (child) ...	Hussein-Dey (Algeria)	Dog	Jan. 19	Jan. 25	Oct. 17	<i>Intransigent</i> , Paris, Nov. 21. [Inoculated in Paris.]
130	Canvy, Dr. ...	Béziers, France ...	Dog	Sept. 30	Oct.	Nov. 3	<i>Journal de Médecine de Paris</i> , November 13.
131	(³) Vial, Rose (70) ...	Arles, France ...	Dog	Aug. 29	Sept. 5	Oct. 3	<i>Journal de Médecine de Paris</i> , December 11.
132	Valla ...	Salettes ...	Dog	Nov. 8	Nov. 13	Dec. 20	<i>Semaine Médicale</i> , February 1, 1888.
133-8	Six persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
139-40	Two persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
					1888 :	1888 :	
141	Boy (4 yrs., name unknown) ...	Paris ...	Dog	Dec. 6	Dec. 12	Jan. 22	<i>Medical Press</i> , London, March 21.
142	Woman (52, name unknown) ...	Paris ...	Dog	Jan. 23	Jan. 29	Feb. 17	<i>Medical Press</i> , London, March 21.
143	Sidi-ben-Isral ...	Algeria ...	Dog	...	...	Mar. 18	<i>Echo</i> , London, March 19. (Death occurred at the Cochin Hospital.)
144	Marinot, Alphonse (soldier) ...	Paris ...	Dog	Feb. 15	Feb. 15	Apr. 1	<i>Journal de Médecine de Paris</i> , April 22.
145	S— (54, farrier) ...	Paris ...	Dog	Nov. 9	Nov. 11	Apr. 3	<i>Journal de Médecine de Paris</i> , April 22.
146	Denis, Cotte (28) ...	Thiers (Puy-de-Dôme) ...	Dog	...	Mar. 6	Apr. 12	<i>Moniteur du Puy de Dôme</i> , April 12.
147	Child (6½ years) ...	Paris ...	Dog	April	April	April	Dr. Dujardin-Beaumetz. — <i>Le Temps</i> , Paris, May 4.
148	Poulet, M. (20) ...	Pecq, near Paris	Dog	Dec. 6	Dec. 8	May 16	<i>La Paix</i> , Paris, July.

(¹) Each died four days after the return from Paris.—(*Journal de Médecine de Paris*, January 2, 1887.) (²) M. Pasteur has stated that Lord Doneraile was not treated under the intensive method. (³) No clinical or experimental proof that the animal was affected with rabies has been produced.—*Journal de Médecine de Paris*, December 11, 1887. (⁴) See No. 265; the two Lindleys were brothers and inoculated together.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1888:	1888:	1888:	1888:
149	Avray, Paul (11) ...	Boisguillaume (Rouen) ...	Dog	Apr. 12	Apr. 17	May 29	<i>Le Petit Journal</i> , Paris, May 31.
150	Olin, Eugene ...	Rue Curial, Paris	Dog	Apr. 23	Apr. 26	June 17	<i>Annales de l'Institut Pasteur</i> , Paris, July 25.
151	(1) Bertin (child, 18 months)	Gentilly ...	Dog	May 15	May 17	June 20	<i>L'Intransigeant</i> , Paris, September 10.
152	Villemain, P. (31 months)	Marseilles ...	Dog	May 9	May 14	June 23	<i>Lancet</i> (Paris correspondence), September 15.
153	Labeaume (37, labourer)	Châtenay ...	Cat	May 29	May 30	July 6	<i>Lancet</i> (Paris correspondence), September 15.
154	A man (name unknown, 28)	France ...	Dog	Dec., '87	Dec., '87	July 1	<i>Medical Press</i> , July 11.
155	Ducos, Mathieu (28) ...	St. Jean de Bonnefond (Loire) ...	Cat	June 16	June 20	July 18	<i>L'Intransigeant</i> , Paris, September 10.
				1886:	1886:		
156	Sinardet, Alphonse (26) ...	Polliot (Ain) ...	Dog	April 26	May 3	July 28	<i>Annales de l'Institut Pasteur</i> , September 25.
				1888:	1888:		
157	Mesnil, L. (44) ...	Châtenay ...	Cat	Mar. 25	Mar. 26	July 30	<i>L'Intransigeant</i> , Paris, September 10.
158	Sarasin, Mdme. (44) ...	St. Meurice, Switzerland ...	Dog	July 1	July 4	Aug. 4	<i>L'Intransigeant</i> , Paris, September 10.
159	Guers, Joseph (27) ...	Chelles (Seine-et-Marne) ...	Dog	July 13	July 16	Aug. 8	<i>L'Intransigeant</i> , Paris, September 10.
160	N — (name unknown) ...	... ..	Dog	July 15	July 16	Aug. 20	Dr. Levraud (<i>Journal de Médecine de Paris</i> , Nov. 18).
161	Bacchi, Emilia (22) ...	Lercara, Sicily ...	Dog	July 19	July 20	Sept. 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
162	Couzinier, Jean (65) ...	Courbevoie (Seine)	Dog	Sept. 12	Sept. 12	Oct. 14	<i>Annales de l'Institut Pasteur</i> , October 25.
163	Bourelly, Leon (14) ...	Marseilles ...	Dog	May 27	June 7	Nov. 2	<i>Annales de l'Institut Pasteur</i> , November 25.
164	Ricciola, Antonia (3½) ...	Palermo ...	Dog	Nov. 29	Dec. 3	Dec. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
165	Child (name unknown) ...	Rio de Janeiro ...	Dog	...	...	23rd day	<i>Medical Press</i> , December 26.
166	One person ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
167-8	Two persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
		[Inférieure)				1889:	1889:
169	(2) Mayland, Rose (3) ...	Belbeuf (Seine-Pyrénées-Orientales)	Dog	Dec. 13	Dec. 15	Jan. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
170	X — (19) ...	Peyrestortes (Pyrénées-Orientales)	Dog	Dec. 8	Dec. 9	Jan. 9	<i>Journal de Médecine de Paris</i> , February 17.
171	(2) Allègre, Louis (14) ...	Cambes (Gironde)	Dog	Dec. 25	Dec. 28	Jan. 14	<i>Annales de l'Institut Pasteur</i> , January 25.
172	Palmeri, Melchiorre (18) ..	Calatafimi, Sicily	Dog	Nov. 30	Dec. 1	Jan. 20	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
173	Druant, Blanche (16) ...	Lariboisière, Paris	Dog	Dec. 25	Dec. 26	Feb. 8	<i>Journal de Médecine de Paris</i> , February 24.
				1889:	1889:		
174	Druaux, B. (15) ...	Aubervilliers ...	Dog	Jan. 7	Jan. 9	Feb. 11	<i>Lancet</i> , March 16.
				1888:	1888:		
175	J. L. Dufour (72) ...	Veyras ...	Dog	Dec. 23	Dec. 25	Feb. 13	<i>Lancet</i> , March 16.
				1889:	1889:		
176	Arenés, Gilles (50) ...	Soler (Pyrénées-Orientales) ...	Dog	Jan. 26	Jan. 29	Feb. 24	<i>Annales de l'Institut Pasteur</i> , March 25.
				1888:	1888:		
177	Rey, Ernest ...	Oissel ...	Dog	Dec. 13	Dec. 17	Mar. 4	<i>Lancet</i> , March 23.
				1889:	1889:		
178	An Italian Child ...	Cairo ...	Dog	Feb. 4	Feb. 9	Mar. 5	<i>British Medical Journal</i> , May 11. [Treated at Naples.]
179	Mahout, Ed. (8) ...	Levallois - Perret (Seine) ...	Dog	Jan. 31	Feb. 3	Mar. 9	<i>Annales de l'Institut Pasteur</i> , March 25.
180	(3) Rascol, Pierre (52) ...	Murat (Tarn) ..	Dog	Feb. 28	Mar. 9	Apr. 14	<i>Journal de Médecine de Paris</i> , October 13.
				1887:	1887:		
181	Moens, Henri (24) ...	Anvers (Belgium)	Dog	Mar. 2	Mar. 7	May 17	<i>Annales de l'Institut Pasteur</i> , June 25.
		[du-Nord)				1889:	1889:
182	Maillot, Mdme. (86) ...	Coatascorn (Cotes-Newry, Ireland ...	Dog	April 27	May 3	June 2	<i>Annales de l'Institut Pasteur</i> , June 25.
183	Waleley, Patrick (7) ...	Newry, Ireland ...	Dog	May 3	May 20	June 13	<i>Annales de l'Institut Pasteur</i> , July 25.
184	(2) Coudurier, Gustave (7)	Noyarey, Grenoble	Dog	June 9	June 15	June 24	<i>Ibid.</i>
185	A Child (name unknown) ...	Milan ...	Dog	May	May	June	) <i>Journal de Médecine de Paris</i> , June 30. [This and the four preceding cases were treated at the Institute of Dr. Bareggi, of Milan.]
186	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
187	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
188	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
189	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
190	Valli, Romeo (11) ...	Milan ...	Dog	May 30	May 31	June 27	) Treated by Dr. Barat-tieri. <i>Il Secolo</i> , of Milan, June 27.) <i>Il Secolo</i> , of Milan, June 28.) <i>Il Secolo</i> , of Milan, June 30.)
191	Bulli, G. (child) ...	Milan ...	Dog	May 30	May 31	June 28	
192	Lurashi, Rosa (14) ...	... ..	Dog	June 10	June 11	June 28	
193	Trottet, G. (13) ...	Paris ...	Dog	May 23	May 25	July 14	
194	Gilbert, Prosper (11) ...	Brussels ...	Dog	June 18	June 24	Aug. 1	
195	Claudel, M. ...	Nancy, France ...	Dog	July 8	July 19	Aug. 6	<i>Journal de Médecine de Paris</i> , October 6.
196	Sottiaux, J. B. (54) ...	Bougival (Seine-et-Oise) ...	Dog	July 5	July 5	Aug. 13	<i>Annales de l'Institut Pasteur</i> , August 25.
197	Manuel, José (6) ...	Asteazu (Spain) ...	Dog	June 30	July 9	Aug. 29	<i>Annales de l'Institut Pasteur</i> , October 25.
198	Auroux, Gilbert ...	Néris-les-Bains ...	Dog	July 7	July 9	Aug. 19	M. Boissier, <i>Journal de Médecine de Paris</i> , Aug. 25.

(1) This and several following cases are admitted by M. Pasteur, and the details have been revised from the official "Annals" of his Institute. (2) Died while still under treatment. (3) Another man bitten by the same dog lived, and Prof. Peter, of Paris, stated that Rascol died of *rage du laboratoire* or Pasteur's rabies.

No.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1889 :	1889 :	1889 :	1889 :
199	Yorke, Claude James (7) ...	Ch. Fenton, Yorks.	Dog	Aug. 5	Aug. 9	Aug. 31	<i>Yorkshire Post</i> , September 5.
200	Bia, Albert (boy) ...	Sala Braganza ...	Dog	Nov. 4	Nov. 5	Nov. 24	<i>Secolo</i> , Milan, November 25.
201-2	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
203	One person ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur, Napoli</i> , by Dr. A. Calabrese, Naples, 1896.
204	Monastirska, A. (6) ...	Charkow, Russia...	Dog	Jan. 27	Jan. 29	Feb. 28	Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
205	Malikyna, Acouline (17) ...	Charkow, Russia...	Dog	June 23	July 1	July 24	
206	Garbounoff, Matrena (50)	Charkow, Russia...	Dog	Aug. 12	Sept. 5	Oct. 9	
207	Messensoff, Pierre (42) ...	Charkow, Russia...	Wolf	Apr. 1	Apr. 3	Oct. 10	
208	Aleksandroff, F. (40) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Oct. 23	
209	Alferenkoff, F. (28) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Oct. 25	
210	Bratelski, Tikon ...	Charkow, Russia...	Wolf	Oct. 18	Oct. 18	Nov. 8	
211	Plotnikoff, L. (55) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Nov. 10	
212	Sawelieff, W. (27) ...	Charkow, Russia...	Dog	June 11	June 13	Dec. 25	
				1890 :	1890 :	1890 :	
213	T—, Alice (8) ...	Paris ...	Dog	Nov. 16	Nov. 19	Feb. 9	<i>Journal de Médecine de Paris</i> , February 16.—Report of Dr. Potin.
		[Loire]		1890 :	1890 :		
214	Paris, Louis (10) ...	Preuilly (Indre-et-Loire)	Dog	Jan. 14	Jan. 17	Feb. 18	Dr. Durand in <i>Annales de l'Institut Pasteur</i> , April 25.
215	Rankin, Joseph (13) ...	Coleraine, Ireland	Dog	Jan. 29	Feb. 2	Mar. 10	<i>Times</i> , London, March 13. [<i>Pasteur</i> , April 25.
216	Olivier, Florian (43) ...	Templeuve (Nord)	Dog	Jan. 27	Feb. 3	Mar. 15	Dr. Tison reported the case to <i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
217	Gerday, Louis (10½) ...	St. Georges (Belgium)	Dog	Mar.	Mar. 23	Mar. 31	<i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
218	Grant, Justin (52) ...	Birac (Lot-et-Garonne)	Dog	Mar. 23	Mar. 31	May 4	<i>Annales de l'Institut Pasteur</i> , May 25.
219	Dubois, Josephine (70) ...	Locquignol (Nord)	Dog	June 15	June 17	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
220	Dégéan, Albert (31) ...	Ste. Livrade (Lot-et-Garonne)	Dog	June 3	June 7	Aug. 6	Dr. Gaumeton reported the case to <i>Annales de l'Institut Pasteur</i> , August 25.
221	Casali, Bianca (7) ...	Copparo, near Ferrara, Italy ...	Dog	Aug.	Aug.	Aug. 29	<i>Roma</i> (Italian Journal), September 8. [Treated at Bologna.]
222	Baudino, Thérèse (13) ...	Bocca, nr. Cannes	Cat	July 30	Aug. 4	Sept. 4	<i>Annales Pasteur</i> , November 25.
223	Martin, Jules (7) ...	Cannes ...	Dog	July 18	July 19	Sept. 16	<i>Journal de Médecine de Paris</i> , September 21.
224	Vidalon, Sébastien (46) ...	Ille-sur-Tet, nr. Perpignan	Dog	Sept. 6	Sept. 10	Oct. 2	<i>Galignani's Messenger</i> , October 8, 1890.
225	Domenech, Jean (boy) ...	Perpignan	Dog	Sept. 6	Sept. 10	Oct. 3	<i>Galignani's Messenger</i> , October 8, 1890.
226	Fournés, Joseph (14) ...	Guyotville, Algeria	Dog	Aug. 1	Aug. 8	Oct. 14	<i>Annales Pasteur</i> , November 25.
227	(¹) Groussous, Jean (52) ...	Fedj-M'sala (Constantine) ...	Dog	Oct. 13	Oct. 22	Nov. 10	<i>Annales Pasteur</i> , November 25.
228-31	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
				1891 :	1891 :	1891 :	
232	Birebent, Jules (24) ...	Pamiers, Ariège ...	Dog	Oct. 10	Oct. 14	Dec. 1	Dr. Allana, <i>Annales de l'Institut Pasteur</i> , January 25.
				1891 :	1891 :	1891 :	
233	Drago, Vincenzo (50) ...	Tripi, Sicily ...	Dog	Nov. 18	Dec. 19	Jan. 5	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
234	Brousse, Raymond (24) ...	Toulonne (Gironde)	Dog	Aug. 16	Aug. 20	Jan. 15	<i>L'Indépendant des Basses Pyrénées</i> , January 22.
				1891 :	1891 :	1891 :	
235	Terles, Barthélemy (59) ...	Sainte-Sixte (Lot-et-Garonne) ...	Dog	Jan. 1	Jan. 5	Feb. 8	<i>Annales de l'Institut Pasteur</i> , March 25.
				1890 :	1890 :	1890 :	
236	Binet, Auguste (75) ...	Méanle (Somme)	Dog	Dec. 5	Dec. 13	April 15	<i>Annales de l'Institut Pasteur</i> , May 25.
				1891 :	1891 :	1891 :	
237	Frouin, Gaston (16) ...	Cubzac-les-Ponts (Gironde)	Dog	Apr. 27	May 3	June 1	<i>Annales de l'Institut Pasteur</i> , June 25.
238	(¹) Fridy, Mohammed D. (25)	Sfax (Tunis) ...	Dog	May 2	May 22	June 12	<i>Annales de l'Institut Pasteur</i> , June 25
239	Gagliani, Agata (4) ...	Palermo ...	Dog	May 4	May 6	June 18	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
				1889 :	1889 :	1889 :	
240	(²) Juda, Isaac (28) ...	Salonica, Turkey	Dog	May 25	June 3	July 11	<i>Annales de l'Institut Pasteur</i> , September 25.
				1891 :	1891 :	1891 :	
241	Milet, Henri (11) ...	Montrenil-sous-Bois (Seine) ...	Dog	June 18	June 23	July 20	<i>Annales de l'Institut Pasteur</i> , August 25.
242	Macca, Concetta (75) ...	Catania, Sicily ...	Dog	July 1	July 21	Aug. 2	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
243	Pélofi, Baptiste (21) ...	Jaurac (Aude) ...	Dog	Feb. 7	Feb. 14	Aug. 8	<i>Annales de l'Institut Pasteur</i> , September 25.
244	Varney, Henry (boy) ...	New York ...	Dog	...	...	Aug. 14	<i>Birmingham Daily Post</i> , August 15.
245	Inzerilla, Pietro (8) ...	Partinico, Sicily ...	Dog	June 14	June 19	Aug. 15	Report of Drs. Blasi and Russo-Travali, Palermo.
246	(¹) Sommier, Joseph (6) ...	Joudes (Saône-et-Loire) [(Spain)]	Dog	Aug. 12	Aug. 16	Sep. 2	<i>Annales de l'Institut Pasteur</i> , September 25.
247	Roig, Juan (13) ...	Puebla de Tiana	Dog	Sep. 7	Sep. 12	Oct. 12	<i>Annales de l'Institut Pasteur</i> , November 25.
248	Morton, Robert D. (young man) ...	Columbia, S. Carolina, U.S.A. ...	Dog	Aug. 6	Aug. 7	Oct. 25	Treated at New York.— <i>Boston Post</i> , October 26.
249	Carry, Louis (13) ...	Lyons ...	Dog	Sep. 11	Sep. 24	Oct. 29	Reported to Pasteur's <i>Annales</i> , (Nov. 25) by Dr. Roux [of Lyons.
250	Bommelle, Xavier (54) ...	Remy (Oise) ...	Dog	Oct. 17	Oct. 20	Nov. 12	<i>Annales de l'Institut Pasteur</i> , December 25.
251	Bolinhas, José (4) ...	Crato (Portugal) ...	Dog	Nov. 3	Nov. 13	Dec. 7	<i>Annales de l'Institut Pasteur</i> , December 25.

(¹) Died while still under treatment. (²) A remarkable case. The patient a doctor, went to Paris for treatment, and died of hydrophobia two years and two months afterwards.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
252-55	Four persons	Treated at Turin	—	1891:	1891:	1891:	1891: <i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
256	Lacombe, Ernest (30) ...	Palestro (Algeria)	Dog	Mar. 17	Mar. 25	Dec. 25	1892: <i>Annales de l'Institut Pasteur</i> , February 25.
257	Beale, George (boy) ...	Kilkenny (Ireland)	Dog	Nov.	Nov.	1892: Jan. 4	<i>Weekly Irish Times</i> , Dublin, January 2.
258	Hayden (9)	Carlow (Ireland)	Dog	May	May	Feb. 4	<i>Times</i> , February 5.
259	Drouet, Georgette (6) ...	D'Issy (Seine) ...	Dog	Feb. 7	Feb. 25	Mar. 11	<i>Annales de l'Institut Pasteur</i> , March 25.
260	Santhoux, Eugène (labourer)	Gex (Ain) ...	Dog	Feb. 9	Feb. 14	April 2	<i>Annales de l'Institut Pasteur</i> , April 25.
261	Pimenta de Castro, B. P. (15)	Vianna de Castello (Portugal)	Cat	Mar. 2	Mar. 8	April 9	<i>Annales de l'Institut Pasteur</i> , May 25.
262	Micoïn, Augustin (18) ...	Versailles ...	Cat	Mar. 15	Mar. 17	April 11	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
263	Ferudja, François (12) ...	Guelma, Algeria...	Dog	Apr. 5	Apr. 12	April 26	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
264	Labelle, Pierre (72) ...	Labèze	Dog	Apr. 9	Apr. 15	May 7	<i>Annales de l'Institut Pasteur</i> , June 25.
265	Segura, Sébastien (47)	Oran	Dog	Apr. 14	Apr. 24	May 15	<i>Annales de l'Institut Pasteur</i> , June 25.
266	Sauzia, Rosario (8) ...	Palermo ...	Dog	April 22	May 6	May 30	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
267	Mathias, Thomas (48) ...	Norvao, Portugal	Dog	June 15	June 30	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
268	Ruffini, Pietro (32) ...	Rocca di Papa, Italy	Dog	Oct. 23	Oct.	Aug. 27	1891: 1891: Died at Rome. Case reported in Italian journals
269	Desvignes, Gustave (39) ...	Avenue de Breteuil, Paris ...	Dog	July 23	July 26	Aug. 29	1892: 1892: <i>L'Etoile Belge</i> , Brussels, September 3.
270	(¹) Lindley, Herbert (17) ...	Cumberworth, Huddersfield	Dog	Aug. 1	Aug. 6	Sept. 7	1887: 1887: <i>Huddersfield Daily Chronicle</i> , September 8.
271	Van Faassen (9)	Bennebroek (Holland)	Dog	June 4	June 18	Oct. 15	1890: 1890: <i>Annales de l'Institut Pasteur</i> , December 25.
272	Gernex, Achille (44) ...	Beaumontz-les-Cambrai (Pas-de-Calais)	Dog	Oct. 25	Oct. 28	Nov. 18	1892: 1892: <i>Annales de l'Institut Pasteur</i> , December 25.
273-4	Two persons	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
275-7	Three persons	Treated at Naples	—	—	—	—	<i>Risultato della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
278	Schirch, Louis (32) ...	Djadjelli (Algeria)	Dog	Aug. 22	Aug. 28	Oct. 24	1893: <i>Annales de l'Institut Pasteur</i> , January 25.
279	Scherr, Emile (35) ...	Oran ...	Dog	Oct. 9	Oct. 16	Dec. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
280	D'Almeida, José J. (10) ...	d'Aveiro (Portugal)	Dog	Nov. 28	Dec. 7	Dec. 30	<i>L'Eclair</i> and other Paris Journals.
281-6	Six Persons	Moscow ...	in	the	year	1892	Dr. Goldenbach, <i>Pasteur's Annales</i> , September 25.
287	(²) Guillon, Augustine (17)	Voiron (Isère) ...	Dog	Dec. 13	Dec. 16	Jan. 4	1893: <i>Annales de l'Institut Pasteur</i> , January 25.
288	Duvivier, Charles (32) ...	51, rue Menilmontant, Paris ...	Dog	Oct. 18	Oct. 20	Jan. 7	<i>The Morning</i> (Paris news), January 7, and <i>Pasteur's Annales</i> , February 25.
289	Nardo, Francesca Maria (6)	Gioiosa, Sicily ...	Dog	May 15	May 18	June 1	1893: 1893: Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
290	Chetal, Antoine (26) ...	Aix-les-Bains ...	Dog	May 3	May 4	June 1	<i>Annales de l'Institut Pasteur</i> , July 25.
291	Chastaing, Léon (28) ...	Paris ...	Dog	May 12	May 15	June 25	<i>Annales de l'Institut Pasteur</i> , July 25.
292	Morel, Auguste (18) ...	Rue Portalis, Paris	Dog	May 30	May 30	Aug. 5	<i>Annales de l'Institut Pasteur</i> , September 25.
293	Mermet, Melchior ...	Bonneville ...	Dog	July 14	July 18	Aug. 6	<i>Annales de l'Institut Pasteur</i> , August 25.
294	Badaluccho, Mario (7) ...	Marsala, Sicily ...	Dog	July 28	Aug. 3	Aug. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
295	Fages, Alfred (40) ...	Alais (Gard) ...	Cat	July 12	July 14	Aug. 20	<i>Le Gaulois</i> , Paris, August 22, and <i>Pasteur's Annales</i> .
296	Montessuy, J. M. (57) ...	St. Pierre-de-Rumilly (H. Savoie)	Dog	July 14	July 18	Aug. 23	<i>Annales de l'Institut Pasteur</i> , October 25. [Oct. 25.
297	Ollero, Nemesio (52) ...	Debicho, Cordova, Spain ...	Dog	Dec. 15	Dec. 26	Jan. 5	1894: <i>Annales de l'Institut Pasteur</i> , May 25.
298	F. Carbonnell (53) ...	Pozzo-Blanco, Cordova ...	Dog	Dec. 18	Jan. 5	Jan. 26	1894: <i>Annales de l'Institut Pasteur</i> , May 25.
299	Robert, Joseph (8) ...	Bougie (Constantine) ...	Dog	Oct. 4	Oct. 10	Feb. 16	1893: <i>Annales de l'Institut Pasteur</i> , April 25.
300	A douanier	Souk-Ahras (Algeria) ...	Dog	Dec.	Dec.	Mar.	<i>Journal de Médecine de Paris</i> , March 18.
301	Fournès, Auguste ...	Chérakas (Algeria)	Dog	Aug. 1	Aug.	Mar. 12	<i>Journal de Médecine de Paris</i> , March 18.
302	Pialut, Huberte (56) ...	Neuilly ...	Dog	Dec. 31	Jan. 3	April 10	1894: <i>Annales de l'Institut Pasteur</i> , July 25.

(¹) See No. 123; the two Lindleys were brothers, and were inoculated together. (²) Died while still under treatment.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA
			BY	ON			
				1894:	1894:	1894:	1894:
303	Varesi, Giovanni (5) ...	Pianello Valtidone, Italy ... [dale	Dog	Mar. 22	Mar. 28	May 15	<i>Il Secolo</i> (Milan), August 13, 1896. [Treated at Milan by Pasteur's intensive method.]
304	Oakes, Enoch (child) ...	Shawforth, Roch-	Dog	May 31	June 5	June 29	<i>Manchester Courier</i> , July 23.
305	Desquincourt, Mdme. (43)	Liévin (Pas-de-Calais) ...	Dog	Feb. 16	Feb. 18	July 12	<i>La Croix</i> , Paris, July 20.
306	Bentivegna, Vincenzo (30)	Corleone, Sicily ...	Dog	Mar. 4	Mar. 6	not given	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
307	(¹) Stevenson, Malcolm (25)	Birkenhead ...	Dog	June 10	July 1	Aug. 8	<i>Birkenhead News</i> , August 11.
308	Delepine, boy (15) ...	St. Denis-des-Monts (Amfreville) ...	Dog	June 16	June 17	Aug. 12	<i>L'Industriel Elbeuven</i> , August 15.
							1895:
309	Saussol, Louise (33) ...	Cessenon (Hérault)	Dog	July 5	July 10	Aug. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
310	Vayre, Louis (5) ...	Bize (Aude) ...	Dog	June 29	July 8	Sept. 1	<i>Annales de l'Institut Pasteur</i> , November 25.
311	Culotta, Michele (74) ...	Bagheria, Sicily ...	Dog	June 18	June 19	Sept. 13	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1895:
312	Meynadier, Achille (39) ...	Sidi-bel-Abbès (Algeria) ...	Dog	Aug. 11	Aug. 19	Oct. 12	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
313	Richaud, Joseph (4) ...	Beaussemlant (Drôme) ...	Dog	Oct. 4	Oct. 7	Nov. 8	<i>Annales de l'Institut Pasteur</i> , November 25.
314	Bentley, James (18) ...	Clayton-le-Moors, Lancashire ...	Dog	Oct. 18	Oct. 23	Nov. 10	<i>Annales de l'Institut Pasteur</i> , November 25.
315	Morreale, Angelo (8) ...	Bagheria, Sicily ...	Dog	July 29	Aug. 2	Nov. 15	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
316-17	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
318-21	Four persons ...	Treated at Naples	—	—	—	—	<i>Risultati della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
							1895:
322	Prévost, Joseph (58) ...	Issy (Seine) ...	Dog	July 30	Aug. 4	Nov. 22	<i>Journal de Médecine de Paris</i> , March 10th, and <i>Annales de l'Institut Pasteur</i> , May 25.
							1895:
323	Barry, Séverin (62) ...	Vattetot-sur-Mer (Seine-Inférieure)	Dog	Dec. 7	Dec. 12	Jan. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
324	Rio, Julien Marie (7) ...	Misillac (Loire-Inférieure) ...	Dog	Dec. 20	Dec. 23	Jan. 22	<i>Annales de l'Institut Pasteur</i> , May 25.
							1895:
325	Garrigues, Elisabeth (29) ...	Castelsarrazin (Tarn-et-Garonne)	Cat	Jan. 15	Jan. 18	Feb. 14	<i>Annales de l'Institut Pasteur</i> , May 25.
326	Stewart, Robertson (38) ...	Glasgow ...	Dog	Mar. 8	Mar. 11	Apl. 1	<i>North British Daily Mail</i> , April 2nd.
327	Longino, Salerno (14) ...	Borgetto, Sicily ...	Dog	Mar. 7	Mar. 9	April 6	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
328	Corepetti, Luigi (7) ...	Bobbio, Italy ...	Dog	April 8	April 10	May 3	<i>Il Secolo</i> (Milan), August 13. [Treated in Milan according to Pasteur's intensive method.] 1896.
329	(*) Blutel, Isidore (27) ...	St. Georges-d'Ambery (Orne) ...	Dog	Apl. 22	Apl. 28	May 14	<i>Annales de l'Institut Pasteur</i> , November 25.
330	Kelly, James (6) ...	Belfast ...	Dog	Apl. 18	Apl. 23	June 25	<i>Irish News</i> , Belfast, June 27, and <i>Pasteur's Annales</i> , [November 25.]
331	(*) Walton, B. A. ...	Houston County, Ga., U.S.A. ...	Dog	May 19	May	June 30	<i>The Dog Question</i> , Dobbs Ferry, N.Y., August.
332	Danio, Diego (15) ...	Grotte, Sicily ...	Dog	May 25	May 31	July 4	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1894:
333	Howard, Benjamin (14) ...	Hyde, Cheshire ...	Dog	Nov. 14	Nov. 18	Aug. 29	<i>Hyde Reporter</i> , August 31.
334	(*) Huard, Joseph (39) ...	Saint Ellier (Mayenne) ...	Dog	Dec.	Dec.	Sep. 14	<i>L'Eclair</i> (Paris), September 15.
							1895:
335	Nothard, Samuel (28) ...	Todmorden, Lancs.	Dog	Sep. 8	Sep. 15	Oct. 17	<i>Manchester Guardian</i> , October 22.
336	(*) Wilkins, Ethel (3) ...	Twickenham Park	Dog	Oct. 13	Oct. 15	Nov. 11	<i>The Globe</i> , London, November 12.
337	Lo Presti Vito (55) ...	Vizzini, Sicily ...	Dog	Oct. 8	Oct. 16	Nov. 25	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
							1896:
338	(*) Wallender, Miss ...	Temesvar, Hungary	Dog	Dec. 25	Dec. 26	Jan. 11	<i>Echo</i> (London), and other journals, Jan. 11 and 13.
339	Plescia, Francesco (10) ...	Contessa Entellina, Sicily ...	Dog	Mar. 2	May 11	Feb. 10	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
340	Lasalle, Louise (28 months)	Pomarez (Landes)	Cat	Oct. 16	Oct. 19	Apl. 4	<i>Annales de l'Institut Pasteur</i> , December 25.
							1896:
341	(*) Labat, Pierre (37) ...	Bordeaux ...	Dog	Feb. 21	Feb. 25	May 24	<i>Annales de l'Institut Pasteur</i> , June 25.

(¹) Lieut. Stevenson, of the 93rd Highlanders, was bitten at Dalhousie, Punjab, India, where his regiment was stationed, and died of paralytic rabies at Birkenhead. (*) This patient was killed through jumping, while mad, from a third storey window; he was twice treated at the Pasteur Institute, in December, 1894, and April, 1895. (†) Became ill before the inoculations were finished, and died two days after their completion. (‡) Treated at the Pasteur Institute, Budapest. (§) Treated at the Pasteur Institute, New York. (¶) This small child received no fewer than 48 inoculations—24 during the last 36 hours of her life, and after her case had been pronounced to be hopeless by the doctors at the Pasteur Institute, Paris. (‡) The biting dog fled and was not traced; the wounds (on the left hand and head) were at once cauterised with a red-hot iron.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
342	Lambert, Thos. D. (18½) ...	Stockport... ..	Dog	1895: Mar. 3	1895: Mar. 8	1896: June 20	1896: <i>Manchester Courier, Daily News</i> (London), and other journals, June 22; <i>Brit. Med. Journal</i> , July 4.
343	Boy	Orthez (Basses Pyrénées) ...	Dog	1896: June	1896: June	June 22	Died at l'Hôpital de la Pitié, Paris.— <i>L'Indépendant</i> (Pau), June 24.
344	Barimbordes, Victor (12) ...	Navarreux, Pau ...	Dog	April 5	April 26	June 21	Telegram from Pau in <i>Il Secolo</i> (Milan), June 26; also <i>Annales de l'Institut Pasteur</i> , December 25.
345	Chapelier-Marty (13) ...	Sauvagnon, Pau ..	Dog	June 1	June 2	June 2	<i>Daily News</i> (London), and <i>L'Indépendant</i> (Pau), June 30.
346	Openshaw, Thomas (man)	Radcliffe, Man- chester	Dog	1895: Nov. 20	1895: Nov. 22	July 14	<i>Manchester Guardian</i> , July 17.
347	Cros, Léon (26 months) ...	Beziers	Dog	1896: July 19	1896: July 25	Aug. 28	<i>Annales de l'Institut Pasteur</i> , December 25.
348	Perico, Luigi (13)	Seriate, Bergamo, Italy	Dog	Aug. 18	Aug. 19	Sept. 6	[Treated at Turin.] <i>Il Secolo</i> , Milan, September 7, 1896.
349	(¹) Van Teyn, Lieut. L. ...	Dutch East Indies	Dog	Sept. 22	Sept.	Nov. 14	<i>La Patrie</i> , Paris, November 26.
350	Cavarroo, Marie (25) ...	Fau, St. Parthem, France	Dog	July	July	Nov. 25	
351	(²) Tibodo, Victor (man) ...	Tourooing, nr. Lille	Dog	Oct.	Oct.	Dec. 5	
352	Avegger, Joseph (20) ...	Willisau-Campagne, Switzerland ...	Dog	1895: Oct. 20	1895: Oct. 28	Dec. 19	<i>Annales de l'Institut Pasteur</i> , December 25.
353	Henry (boy)	Baltimore, U.S.A.	Dog	1896: Dec. 1	1896: Dec. 4	Dec. 21	1897: Two of these cases were reported by <i>British Medical Journal</i> (quoting <i>Daily Mail</i>), January 2, the four reported and vouched by Dr. Dulles, Philadelphia. All were treated by Dr. Gibier, New York.
354	Eppers (boy)	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
355	Perry (boy)	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
356	Wilson (boy)	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Jan. 5	
357	Davoust, Médéric (60) ...	Livry-sur-Orthon, France	Dog	1897: Jan. 15	1897: Jan. 19	Mar. 17	<i>Le Petit Parisien</i> , March 20.
358	Thompson, James (4) ...	Reddish, Man- chester	Dog	1896: Dec. 11	1896: Dec. 14	Mar. 27	<i>Manchester Guardian</i> , March 30.

(¹) Treated and died at Batavia; case reported by Mr. A. J. J. Eeling, of Amsterdam.

(²) The treatment is stated to have been left unfinished owing to an attack of fever.

RECAPITULATION.

INOCULATED IN PARIS:—

1. Under first formula	41
2. „ intensive treatment	28
3. „ third formula	164
	233

INOCULATED IN RUSSIA:—

1. At Odessa	26
2. At Charkow	9
3. At Moscow	6
4. Elsewhere in Russia	8
	49

INOCULATED AT OTHER CENTRES:—

1. In Italy	67
2. At Rio de Janeiro	1
3. At New York	6
4. At Budapest	1
5. At Batavia	1
	76

Total deaths after preventive treatment 358

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVII. No. 2.]

LONDON, JUNE 1, 1897.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Society's annual meeting took place on the 21st ult. at the Queen's Hall, Langham Place, under the presidency of Lord Coleridge. The attendance was large and the speeches able and important. The report of the meeting and the twenty-second annual report will be found in our special supplement.

WE learn that at the meeting of the Women's Liberal Federation, Mrs. Stewart Brown said the resolutions in reference to vivisection would be withdrawn, because anti-vivisectionists were perfectly satisfied with the verdict the council had so overwhelmingly given during three successive years, and they would not again have brought the subject forward except that anonymous leaflets had been sent to their associations, which were full of misstatements that they desired publicly to refute.

IN the House of Commons, on April 8th, Sir Michael Hicks-Beach presented a petition from a public meeting of inhabitants of Clifton, held at the Blind Asylum Music

Hall on the 3rd April; Joseph Storrs Fry, Chairman, praying for the Total Prohibition of Vivisection.

IN the *Anwalt der Thiere*, Herr Bergner explains his scheme for a "World Union" against vivisection. The chief points are:—(a) Membership to be by registration only, subscriptions and donations being voluntary. (b) All Societies who have declared themselves in favour of the total prohibition of vivisection to be admitted to the Union with the whole of their members. (c) A congress to be held once every three years. The President of the local Society where the congress is held to preside at the congress, and to be President of the Union until the next congress. (d) The combined Presidents of the various local Societies to form the Executive. (e) The organ of the Union to be published quarterly in French, German, Italian, Russian, and English.

THE *Anwalt der Thiere* publishes a translation of Dr. Berdow's address before the Buda-Pesth Congress.

THE same paper states that "the serum imposture which combines with the torture of the animals the dissemination of the plague amongst men, is assuming great dimensions in Russia. In Cronstadt a large laboratory for the culture of anti-plague serum is being erected. Three hundred and fifty horses, destined to be used in the production of the serum have already been purchased."

THE *New York Medical Journal* says that Dr. John Doring treated seven successive cases of diphtheria with antitoxin and lost every one of them. Dr. Alexander Dallas, of Bayonne, lost with antitoxin ten patients in eleven consecutive cases. Dr. Smith, of Newark, Dr. Haggerty and Dr. Huber have given up the use of the nostrum, and Dr. W. Gayton, of London, who signed the report favouring the use of antitoxin in the London hospitals, refused to have it used upon himself when he was stricken with the disease. He told Mrs. Winters, the wife of Dr. Winters, that he would not have antitoxin used upon him if he were to die of diphtheria.

NOTHING more clearly exhibits the powerlessness of physiology to help the physician in a difficulty than the absolute chaos of the diet and therapeutic treatment of gout. Abstain from meat and live on vegetables say many of our most eminent doctors, these are contradicted by an opposing school who confine their patients to a strict meat diet. Some swear by alkalies, others by acids, in the treatment of the malady. All are agreed that uric acid has a good deal to do with the complaint, but whether to keep it in the blood, cause it to be deposited

in the joints, or excreted by the kidneys, they are in flagrant disagreement with each other, and all their experiments seem only to add to their confusion.

PHYSIOLOGISTS have for some time past been engaged in researches on the brain centres for the voice. They term this study "experimental investigation on phonatory centres in the brain." Felix Klempever (*Arch. Laryngol u. Rhinol*, II. iii.) has reached the following conclusions. Krause demonstrated by experiments that in the brain of a dog a region exists which responds to electrical stimulus and moves the vocal cords. This was confirmed by Horsley and Semon. The experiments consisted in removing the brain slice by slice and stimulating with electricity the surface of the cut parts. Thus the existence of a laryngeal centre in each half of the brain giving nerve power to both vocal cords from either side came to be considered an assured fact.

A PHYSIOLOGICAL discovery, however, is like a ninepin set up by one man to be knocked down by another. So along comes Massini, who, after more experiments, declares that the brain centre of the voice only acts on one side not on both. Then Semon and Horsley repeat their experiments "with special reference to this point" and said that they could never observe motion but of one cord. Massini insisted on his view, and French authorities supported it. Then Onodi comes along and contradicts Massini.

THE research now entered on a third and more cruel stage. A great number of experiments on dogs and cats were performed by inoculating the supposed voice-producing centres in the brain with tubercle and typhoid bacilli. Four dogs died of diffuse tuberculous meningitis (inflammation of the brain) or complicated suppuration, but it was discovered that no disease artificially produced caused laryngeal paralysis. Therefore, said the experimenters, the so-called motor laryngeal or voice-producing centre is of no pathological importance. Once more has the physiological parturient mountain brought forth its most ridiculous mouse.

THE Turks, strange to say, have the reputation of being kind to animals. Mr. H. C. Thomson in his new book, *The Outgoing Turk*, says, "They are seldom wantonly cruel; that they would look upon as a sin." "I will kill a man," said a Turk to the author, "because he can defend himself, but I will not kill an ant, because it cannot." The Koran instructs him that the beasts which cover the earth, the birds which traverse the air, are creatures like unto yourselves. All are written in the book. They will appear again before Him."

THE studies of bacteriology and serum-therapy lend themselves readily to experiments on hospital patients. Abel (*Deutsch Med. Woch.*, Nov. 29, 1894) investigated the protective power of the blood-serum of patients recovering from diphtheria. He obtained the blood-serum for these experiments by cupping the patients on the back. The results were not very satisfactory.

THE *Chemist and Druggist* (May 8th, 1897) says, "The Managers of the Edinburgh Royal Infirmary are finding that serum treatment is somewhat costly. It was stated at a meeting last week that between £50 and £60 worth of anti-toxin was used in a single case of tetanus which

recovered." No wonder that Bacteriology—or, as the Americans call it, "Bug-ology"—is so fashionable. The keeping of a Serum Institute must be as profitable as South African gold mining.

THE Koch "cure" for rinderpest has turned out, like the tuberculin cure for consumption, a wretched failure. The Professor has gone back to Germany, after instructing a number of persons in the art of preparing and applying his new specific, but he had scarcely left Africa when his failure became conspicuous. "In the Orange Free State," says the *Chemist and Druggist* (May 8th, p. 751), "800 cattle were recently inoculated by trained Government officials, in strict accordance with Dr. Koch's methods. Of this herd, 150 have already died, and 200 more are afflicted with acute rinderpest."

DR. KOCH stated that the disease might appear in a mild form in the inoculated subject up to ten days after inoculation, but that after that time an inoculated animal would be absolutely immune against the plague. In various districts inoculation has been stopped, pending further inquiry. In Basutoland six cattle, specially picked, were inoculated by an expert. They were kept apart with the intention of afterwards turning them into a herd of uninoculated cattle, to see if they remained immune. But three of the six have already died from the plague. In our foreign intelligence we present our readers with full particulars of Dr. Koch's latest and most damaging failures.

MR. M. L. BRESLAU thus writes in the *Echo* on the "New Era for Horses." We feel great pleasure in calling attention to his article, because we are convinced that we ought to have many friends of the animals amongst the Jews:—

"With the optimism which is my besetting vice, I cannot but think that that magnificent gathering in St. Martin's Town Hall on May 5th, under the auspices of the Humanitarian League, and so artistically 'stage-managed' by Mr. H. S. Salt, in defence of our befagged, over-worked, and under-fed London horses, marks a red-letter day in the annals of social regeneration, and is the forerunner of a spirited crusade against the forces of reaction and brutality. Personally I am not a member of the redoubtable league and detest labels of all kinds. Humanitarianism for me is only a twig in religion's tree, not a badge of good conduct. Hence I decline to be called a 'Humanitarian.' The religion I profess teaches, and the race to which I belong practises, works of mercy and charity with a calm sangfroid, lacking all the inspiring elements of enthusiasm, but abounding in the larger graces of duty. Though I disclaim all sectarianism in this question—the purest idealism sees all things steadily, and sees them whole and not fragmentarily or from different planes—we Jews possess a unique code of laws germane to the correct treatment of animals. In fact, so uniformly high was the standard of kindness among my ancestors that the doctors of the Talmud remarked, 'Israel love their beasts of burden.' Now, this is the sternest answer which the League may make to its Zoiluses:—'Why, if we are animal-worshippers, we are proud of it, for the ancient Jews have set us a worthy example.' Show me, if you can, a similar order in any code of morals preserved out of the ruins of antiquity, whether among the Greeks, Romans, Persians, or Confucius, like unto this, which I cull from the open pages of Tractate 'Berachoth':—'You are not to take any food whatever until you have fed your horse.' That is the Bible of humanitarianism; all the rest is mere commentary. But if you say, 'That is right enough for Jews; and is not binding at all on our consciences,' I retort: 'Read your Shakespeare; read Leigh Hunt's incomparable essay, 'Coaches and Horses,' the finest piece of pathetic writing in our language; read Dibdin's 'High-mettled Racer'; read

Wordsworth's modern epic, 'The Waggoner;' and, if your heart is not profoundly stirred to its utmost depths, if you do not finally resolve to enrol yourself as a special constable in the interests of horses and donkeys, if you do not place yourself in the forefront of the battle, now to be waged, with ardour, with determination, and with unquenchable hope against the enemies at the gates, then I am afraid that to fine writing, noble sentiments, and passionate appeals, Nature, for some mysterious reason, has given you no key, and has debarred you the gratification of the highest forms of pleasure, and denied you the power to serve your fellow men."

MR. MALCOLM MORRIS, F.R.C.S., in his article in the *Nineteenth Century* for May, on "The Progress of Medicine during the Queen's Reign," says, "Of the horrors of operation before the discovery of anæsthesia there are men still living who can speak. Not long ago Dr. B. E. Cotting, ex-President of the Massachusetts Medical Society, contributed some personal reminiscences of pre-anæsthetic surgery to the *Boston Chemical and Surgical Journal*." Speaking of the first case in which he was called upon to use the knife, in the very year of the Queen's accession, he says:—

"Our patient (a woman) writhed beyond the restraining power of strong and experienced men, and groaned to the horror of the terrified household, and afterwards, to the day of her death, could not think of the operation without convulsive shudders. Often did she hold up her hands exclaiming, 'Oh, that knife! that awful knife! that horrible knife!'"

DR. COTTING sums up his recollections of such scenes as follows:—

"No mortal man can ever describe the agony of the whole thing from beginning to end, culminating in the operation itself, with its terrifying expressions of infernal suffering."

Another doctor, who himself underwent an operation, says:—

"Of the agony occasioned I will say nothing. Suffering so great as I underwent cannot be expressed in words."

But all this agony was nothing in comparison with that inflicted on animals under the vivisector's knife. The surgeon's work was finished in a few minutes; operators vied with one another who could operate the quickest. The vivisector working with curare takes hours, sometimes days, to complete his experiment, and he dives deeper into the tissues and explores organs that are not touched in human surgery. He stimulates with electricity, experiments with drugs after he has made his incisions and performed his dissections; the pre-anæsthetic surgeon did none of these things. If the agony he inflicted could not be set forth in words, what language, be it of angel or man, can express the tortures of the physiologist's rack?

WE have been told by physiologists that no pain is felt after the superficial incisions are made, that the deeper structures, the muscles and bones, are insensitive, and the skin alone responds to the vivisector's knife, but Mr. Malcolm Morris's article disposes of this pretence. He says, "The pain caused by operations prevented their being undertaken except as a last resource, and many patients preferred death to the surgeon's knife."

WE have in this revelation of pre-anæsthetic surgery a complete answer to those who pretend that morphia, opium, and other narcotics are true anæsthetics. Opium was well known and in constant use in the days before chloroform was discovered. Morphia is but the active

principle of opium. If these drugs could annul the agony of a surgical operation why were they not used in the old days? It is one of the meanest subterfuges of a mean and cowardly practice to pretend that morphia, chloral, and the like, are anæsthetics, and Mr. Morris's article proves it. Nobody would submit to have a tooth extracted under morphia if he could have gas or other efficient anæsthetic.

ANTI-VIVISECTIONISTS who oppose anti-toxin and the anti-rabic inoculations of Pasteur are frequently asked how it is they are so inconsistent as to support vaccination when both theories are similar? The editor of the *Medical Brief* replies (May, p. 697) thus: "The theory of vaccination and the anti-toxin theory are as far apart as the poles. The virus of smallpox inoculated on the cow is taken directly from a person suffering from that disease. This inoculation is said to produce a modified form of smallpox in the cow, and the vaccine virus is, therefore, simply an attenuated form of the original. In the case of anti-toxin, the poison with which the horse is injected is an alien one produced by the putrefactive changes occurring in a germ-culture medium exposed to air and heat. The horse does not have diphtheria or anything like it. He does have septicæmia, and his serum is nothing but an impoverished, hydræmic, tainted fluid."

WE quote the following example of Dying Scientifically from the *St. Louis Republic*, April 8th, 1897:—

"James H. Williamson, fifteen years of age, died at the Christian Orphans' Home, in Aubert Avenue, Tuesday afternoon, under peculiar circumstances. He had been given an immunizing injection of anti-toxin about three o'clock that afternoon as a *preventive of diphtheria*, which is epidemic at the institution. About forty minutes later he was a corpse. Dr. William Nifong made the injection, which was only fifty drops, and much below the average dose. A few minutes after the injection young Williamson complained of a feeling as though needles and pins were sticking him all over the body. These pains grew intense, and Dr. Nifong, who was still in the building, was called, but could do nothing for the boy, and he died in great agony about twenty minutes to four. Dr. Nifong immediately requested that an autopsy be held, and the Coroner sent several physicians out to the institution yesterday afternoon, where an examination of the remains was made. It was decided by the physicians that the injection of anti-toxin, while not large, had a direct effect on the heart of the boy, which, being weak, paralysed it, thus producing almost instant death."

Comment is quite unnecessary; death was caused in the "regular" manner.

To return to the methods of the middle ages is termed by the experimenters with animal extracts the "advance of science." The occult has always had a strange fascination for the human mind. People were frightened into obedience and robbed of their money in the bad old days by the adroit employment of mystic and terrifying practices. The invisible was employed to dominate the visible, and doctors were adepts in the art. Science is fast liberating men's minds from medical superstition, but the pseudo-scientists, fearful of losing power over their patients, invoke the aid of microbes and bacteria to re-enslave them. Anti-toxin is merely a twentieth century translation of the demon theory of disease.

AFTER the doctors have been giving testimonials broadcast to the manufacturers of meat extracts for

years past, their friends, the physiologists, now say that dogs fed exclusively on meat juice in Vulpian's laboratory died at the nineteenth day, while others to whom water alone had been given survived within one day as long, dying the eighteenth day—showing the negative nutritive value of meat broths. Yet the advertisement pages of the medical journals and the columns of text books of medicine chant the praises of these worthless nostrums as though they were the outcome of the highest medical science. The medical journals pay little regard to the teachings of the experimenters when it pays to ignore them.

THE debate on the ethical aspect of vivisection at South Place Chapel, Finsbury, on Sunday evening, May 9th, calls for more than a passing notice in our Home Intelligence. Dr. Moncure Conway, the minister of South Place Ethical Society, lectures to one of the most intellectual congregations in London. The objects of the Society are declared to be "the cultivation of a rational religious sentiment, the study of ethical principles, and the promotion of human welfare in harmony with advancing knowledge." It was highly appropriate, therefore, that our question should be seriously discussed by the members, and discussed it was with much warmth of feeling. Although the scientific side of the question was no part of the programme, it was found impossible to avoid trenching upon it to some extent, and as Dr. Drysdale and Dr. Newton Porter supported vivisection and were opposed by Dr. Berdoe and Dr. Haughton, there were some lively episodes of a scientific character.

DR. DRYSDALE declared that consumption was discovered quite recently to be contagious in consequence of experiments on "a rabbit." Dr. Berdoe pounced upon this use of the singular number so much affected by our opponents, it is always *a* rabbit, *a* newt's tail, *a* frog's back, and never a thousand rabbits, half a million dogs, or even higher numbers, far more nearly approaching the truth about the sacrifices on the altar of physiology. As a fact Dr. Berdoe said Sir Andrew Clark had used hundreds of animals in a single research on the cause of consumption without the least result. Dr. Berdoe explained that consumption was discovered to be contagious by Frescatorius, who lived 1483—1553.

DR. MEADE says (*De Morbis Contagiosis*, lib. 7, cap. ix.) that Frescatorius knew that "consumption is contagious, and is contracted by living with a phthisical person, by the gliding of the corrupted and putrefied juices of the sick into the lungs of the sound man." He inferred the microbes which we see.

Dr. Meade lived 1673—1754, so that the microbe-hunters were well aware what they had to look for.

EXPLAINING the anæsthetic juggle, Dr. Berdoe said that chloroform and morphia were the pretences of the laboratory, the real thing employed was curare. A gentleman rose in the body of the chapel and desired to know how it was discovered that curare left the sensory nerves unaffected, if all the motor nerves were paralyzed by which sensation could be expressed. Had any experiments been made upon human beings? Dr. Berdoe explained that as the use of curare required cutting the throat so as to perform artificial respiration such experiments could not be carried out, but he assured the meeting that Claude Bernard, and all other eminent physiologists had decided that curare left the

sensory nerves unaffected. Dr. Newton Porter protested that morphia was a true anæsthetic, but Dr. Berdoe asked him why curare was injected after the animal had been given a dose of morphia which, on Dr. Porter's showing, ought to have kept the animal senseless and motionless. To this no reply was vouchsafed.

THE apologists of vivisection, Dr. Conway, Dr. Drysdale and Dr. Porter, held that no painful experiments should be permitted for demonstration. That all painful experiments in the laboratory should be performed under efficient anæsthetics, but that pathological experiments, especially those connected with the study of bacteriology should be permitted at the discretion of the operator. This, although not by any means satisfactory to us, denotes a distinct advance in the acceptance of our principles, and encourages us to hope that when they are more thoroughly understood we shall win all along the line.

THE meeting was a large one, the attendance of men was exceedingly good, and as South Place is a leading centre of ethical thought, we may hope for great things from so free and able a presentation of our principles. It is most encouraging to know that this large and representative gathering was due to the exertions of Mrs. C. R. Brace, a lady who listened with great interest to a lecture on vivisection delivered by Mr. Ernest Bell a few months ago to an audience of less than a dozen persons. We must never despise the day of small things!

THE uselessness of a large proportion of experiments on animals is well illustrated by the following extract from the Paris correspondent of the *Daily Telegraph* (May 1st). At the Jardin des Plantes some subterranean passages have recently been explored.

"The discovery proved very timely to one of the Professors at the Museum, M. Armand Vire. This gentleman had made a study of the effect of keeping different animals shut up in caves away from light. He at once conceived the idea of utilizing the newly-found catacombs for this purpose, in preference to more or less open grottoes hitherto in use. The idea was at once put into execution, and now the laboratory has just been inaugurated. A party of fifty guests and members of the museum descended into the depths of the earth to inspect the arrangements for the reception of the animals to be secluded there at a depth of some forty feet, and then a number of lofty, spacious, but dark, chambers connected by long galleries were examined. In one were tanks and reservoirs filled with tadpoles, spawn, and small fish. At first water from the Seine was introduced, but the finny inhabitants speedily died, and spring water has replaced it. In other parts cages have already been built into the rocks, and herein are placed rats, guinea-pigs, and half-a-dozen other species of animal life. Now, in the interests of science, the effect of total obscurity on birds, beasts, and fishes will be anxiously watched. Even what light has to be shown, either by the keeper or a visitor, will be shaded by red glass. It is well known that continual darkness has caused the vision of animals to become practically destroyed, and with this excellent opportunity for scientific study it is hoped that much more may be learnt. Indeed, it is considered probable that a new type of creature may be produced."

The report of the proceedings at the Pasteur Institute in Paris for the year 1896, appears in the issue of the *Annales* for April. It is stated that 1308 persons were treated, and that three died, making an average mortality of 0.30 per cent. or less than one death in 300 patients treated. Of the biting dogs no fewer than 455, or more than one in three of the whole, were suspected only

of rabies. As showing how incomplete, and therefore inaccurate, are the Pasteurian returns, we may point out that in the statement we published last month there are detailed and certified the deaths of seven patients, all treated at the Pasteur Institute in Paris in 1896, namely:—

	Date of Treatment.	Date of Death.
1. Tabet, Bordeaux	February 25	May 24
2. Boy, Orthez	June	June 22
3. Barimbordes, Navarreux	April 26	June 20
4. Cros, Léon, Beziers	July 25	August 28
5. Cavarroc, Fan	July	November 25
6. Tibods, Tourcoing	October	December 5
7. Thompson, J., Manchester	December 14	Mar. 27, 1897

These figures, probably far from complete, as will be observed, more than double the total of cases admitted by the Pasteurian authorities, and of course, also destroy the accuracy of their average.

"The collected papers, Physiological Laboratory of Harvard Medical School," describe [among various others] *over nine hundred experiments upon cats by one Boston vivisector*—whose name is given—all made upon the nervous system. Vivisectors would doubtless describe these researches as "tickling a cat's back to discover"—what!—We have not heard. Medical literature is silent on the matter!

Mr. J. K. Jerome, editor of *To-day*, thus replies to a correspondent on the question of vivisection in the number for May 1st:—

"CLARENCE.—I read your kind and temperate letter with pleasure. About vivisection, I never hope to agree with the majority of medical men, but you must admit they are more likely to be prejudiced than am I. The killing of animals I do not take into the question at all. I should be willing for every medical man to spend two hours a day in killing animals, and should think none the worse of him for it if he had any reasonable object in view. Cruelty, as I have said over and over again, is another matter. To my mind it is an outrage upon the laws of God and man, and no end would justify such means. Cruelty appears to me the very worst crime in the list. All other things—murder, lying, slander, adultery, etc.—appear insignificant by comparison. Life is full of temptations, and an honest man may, in the course of his existence, break the whole Ten Commandments; but the man who practises cruelty ceases, to my mind, to be a man at all. He is a creature outside, direct from hell. If I had an office boy that I discovered belonged to the Clan-na-Gael I should promptly kick him out of the office, and I think the hospital would be all the better for not including upon its staff known vivisectors. On all other matters we seem to agree most heartily, and I am inclined to think that, had your fate made you a journalist instead of a doctor, I might have been finding you fighting side by side with me on this matter of vivisection. It is impossible not to be influenced by the general opinion of one's class. The duologue you enclose me gave me some amusement. I think Mr. Jones, the dramatist, once prescribed as a cure for a good many ailments, 'the earning of five shillings a day, and the living upon it.'"

M. CHARLES RICHET, the vivisector, has been interviewed by Marie A. Belloc and some of his views are stated in the *Humanitarian* for May. The physiologist said, "I have a great many lady medical students under me for examination in taking the degree of medicine. As compared with the men, I should say that women students are not as successful when dealing with abstract science. It is early yet to say whether they will ever rival men in experimental and scientific medicine." It must be a sight to make angels weep, to watch the Professor of Physiology of the Paris Faculty of Medicine

striving to petrify the woman-soul in his girl pupils till they can imitate Goltz and Paul Bert in amputating the breasts of goats, dogs and rabbits to test the feelings of the tortured creatures towards their young.

WE are indebted to the "Science Notes" of the *Pall Mall Gazette* for May 17th. We put the matter fairly to any unprejudiced scientific physician. Assuming this to be the high water mark of bacteriological science in relation to medicine, what can be more thoroughly empirical than the serum treatment which we are asked to welcome as the outcome of the most advanced medical science of the day? Is it more "scientific" than the hideous therapeutics of the middle ages?

"The mechanism of protective immunity, which is the basis of the modern serum treatment, is still unexplained. M. Calmette has recently published a series of experiments dealing with this point, and many of his results appear anomalous. For example, snakes are supposed to be proof against their own venom by reason of some active property in their blood, but M. Calmette finds that snake blood, instead of conferring immunity, is itself poisonous. Snakes, moreover, are not entirely proof, as has been supposed, but can be killed by a sufficiently large injection of the venom. Pigs, again, are proof against snake bite, and are often employed to destroy snakes; but pig's blood has no immunizing properties, and apparently no modifying action on the venom. Hedgehogs, fowls, and tortoises all possess a strange power of resisting the effects of the vegetable poison abrine, yet, whereas the serum of the hedgehog has to some extent an immunizing influence, that of the other two animals has none. M. Calmette's experiments of mixing toxins and anti-toxins together and injecting them simultaneously have produced some curious results, but do not seem to point to any active modification of the toxin, such as has been assumed."

PARTICULARS of the will of the late Mrs. Massingberd, founder of the Pioneer Club, where she collected around her a number of Anti-vivisectionists, as zealous in the cause as herself, were published in the course of the past month. In certain contingencies the remainder of the proceeds of the sale of her leasehold house, 22 Bruton Street, in which the Pioneer Club was and is still located, is to be distributed in equal shares among all the Anti-Vivisection Societies in London.

THE anti-toxin employed in the treatment of diphtheria was originally only the serum or thin part of the blood saturated with weakened germs of diphtheria. Many deaths resulted from its use and were no doubt due to the decomposition of the organic matter contained in the serum. Certain deadly poisons called ptomaines resulted, and these killed the patients. The serum enthusiasts tried to remedy the evil by adding antiseptics to their anti-toxin, such as carbolic acid and creosote. But it has been demonstrated that these agents destroy the bacilli; therefore if the serum contains any bacilli they are killed by the antiseptic, and the anti-toxin is inert. If it has any value at all it is simply as a disinfectant, and not a scientific one at that.

THERE is no dependence to be placed in statistics of cure of diphtheria by anti-toxin; they are misleading because they include all cases of inoculation, among which thousands of individuals are reckoned who simply submitted to inoculation for the prevention of diphtheria. "Last year," says Dr. M. E. Chartier, "in Paris seventy-five per cent. of the reported cases of inoculation were not affected with diphtheria." The gullible medical profession will swallow anything in the way of a cure

provided only that it is the product of a laboratory for research involving experiments upon animals.

THE *Medical Week* (May 21st) reports that Dr. M. Saenger, of Magdeburg, has discovered that the Golden Seal (*Hydrastis Canadensis*) is an exceedingly valuable remedy in the treatment of bronchitis, possessing an expectorant and also a soothing action on the cough. It appears that Dr. Saenger became aware of the therapeutical properties of the drug *quite accidentally* in the case of a consumptive patient, who was taking it for an attack of blood-spitting. Dr. Saenger considers that this remedy is far better for bronchitis than all other drugs hitherto employed in this disease, and he has in consequence, now almost completely given up the use of opium and morphia in the treatment of bronchitis. If the remedy stands the test of general experience, it will be an infinitely greater boon to suffering humanity than anything the animal torturers have ever given us. It is to be noticed that the discovery was quite an accidental one, as were most of our best remedies.

DR. R. KRAUS told the Imperio-Royal Medical Society of Vienna on April 20th, 1897, that he had experimented with the blood-serum of cholera and typhoid fever patients with a view to study the phenomena connected with the mechanism of agglomeration of the cholera and typhoid bacilli. Now these patients must have been bled to procure the serum, and as bleeding is not a justifiable method of treatment of cholera or typhoid fever it is obvious that the proceeding was a mere bacteriological experiment, which could only have tended to weaken patients already suffering from terribly exhausting diseases.

OUR CAUSE IN PARLIAMENT.

On Thursday, April 29th, Mr. Weir asked the Secretary of State for the Home Department if he would state the number of persons in England, Scotland, Ireland, and Wales respectively licensed to practice vivisection, and how many of them held certificates to dispense with anæsthetics. Sir Matthew White Ridley replied that the number of persons licensed at the present time in England was 145, in Scotland 52, and in Wales one; the number holding the certificate dispensing with anæsthetics was in England 86, in Scotland 30, and in Wales none. The only figures in his possession as regards Ireland were those for 1895; in that year the number of licenses was six, of whom one held a certificate dispensing with anæsthetics. In giving the hon. member these figures he might remind him that the certificate in question was never given for operations involving serious pain, but only for such operations as inoculations or hypodermic injections. We are sorry to know that the Home Secretary has endorsed the shameful subterfuge of the vivisectionists, by which the most terrible vivisections are constantly performed under sham anæsthesia. By calling morphia and chloral anæsthetics, though they are merely narcotics, the spirit of the law is daily broken, though the letter is by a thinly-veiled trick seemingly complied with. Anti-vivisectionists must devote their energies to exposing the fraudulent pretence of calling morphia and chloral anæsthetics.

VIVISECTION AT THE LONDON HOSPITAL.

On May 6th Mr. MacNeill asked the Home Secretary whether the London Hospital Medical School was registered under 39 and 40 Vic., cap. 77, in the years 1895 and 1896 for the performance of experiments on living animals; whether the Government Inspector in his report, dated the 5th of July, 1896, stated "that the names of all those 'licensed places' to which licensees were accredited were given in the tables;" and whether, having regard to the fact that the London Hospital had been omitted from the tables of the Government Inspector's report for the year 1895, the Home Secretary

would order an amended report of the experiments on living animals to be issued which should be accurate.

Sir M. W. Ridley—The answer to the first two paragraphs is in the affirmative. There has been no inaccuracy, however, in the returns, and the hon. member will find the London Hospital mentioned. I must certainly decline to issue an amended table, but to meet what I imagine are the hon. member's wishes I have directed that in future returns all registered premises shall appear in the body of the table, whether any experiments are performed in them or not.

THE PASTEURIAN PROGRESS—TWO MORE DEATHS.

Le Mèdezin (Brussels, April 25th) quoting Parisian journals, announces the death of Gaston Mauléon, a boy of nine years. He is stated to have been bitten by a dog, and immediately submitted to the Pasteurian treatment, which was carried out for the regulation period. Some time later the unfortunate child was seized with symptoms which are stated to have resembled those of tetanus, and died a painful death. We may remark that *Le Mèdezin* inadvertently misquotes us in saying we have published a list of nearly 500 deaths after the Pasteurian treatment. It should have been nearly 400.

L'Éclair (Paris, May 17) announced the death, on the previous day, of Mousieur Paul Fortin, a young man of twenty-one years, who had been employed in a wine shop at Nanterre. On the 28th of January last, he was following his vocation when he was bitten by a dog alleged to have been mad. He was sent to the Pasteur Institute in Paris, where he remained for a fortnight, undergoing the treatment. "He was believed to have been cured," says the journal we have quoted, "but, on Saturday, May 8th, he was seized with alarming symptoms, which necessitated his removal to the Beaujon Hospital, where he died on the 16th, after a week of severe suffering."

REVIEW.

Vivisection: A reply to a letter written by Dr. Caton to the Chairman of an Anti-vivisection Meeting held in the Y.M.C.A., Liverpool, in April, 1897. By the Rev. Theodore A. Howard. London: Simpkin, Marshall and Co. Ltd. 1897. (Price 2d.)

Mr. Howard has rendered a great service to our cause by his admirable presentation of the case against vivisection. Dr. Caton will be sorry his evil genius prompted him to write to Mr. Guthrie and say "it is the bounden duty of the medical profession to use every means which God has given us to find out the causes of, and so to prevent the disease, suffering, and premature death which affect human and animal life." To use the words "every means which God has given us" in connection with vivisection justifies the author in saying "I charge him with blaspheming the name of God when he endeavours to make Him a party to the atrocities of vivisectionists." In a pamphlet of twenty-seven pages, Mr. Howard has given us the strongest and most lucid indictment against scientific cruelty we have read for a long time. Our friends should circulate it as widely as possible.

OUR CAUSE IN THE PRESS.

The *Catholic Times* recently published a letter signed "A Tertiary of St. Francis" expressing distress at the teaching of Father Rickaby on "the So-called Rights of Animals," and asking if this could really be the authoritative teaching of the Roman Catholic Church. Dr. Berdoe replied in the following letter, which was published in the issue of April 30th.

The Editor of the "CATHOLIC TIMES."

SIR,—As I have been equally distressed with your correspondent, "A Tertiary of St. Francis," concerning Father Rickaby's teaching on the "So-called Rights of Animals," and as I have made it my business to discover what is really the teaching of the saints and theologians of the Church on the matter, I am happy to be able to reassure your correspondent, and with your kind permission will lay before your readers some of the results of my investigations.

In the "Commentary on the Holy Scriptures," by Cornelius a Lapide, S.J., vol. xv., Paris, 1859, on Prov. xli. 10, we read:

"So St. Chrysostom, Hom. 29 on the Epistle to the Romans, says: 'For the souls of the saints are so vehemently tender and philanthropic, not only towards their belongings but also towards strangers, that they extend this tenderness even to brute animals.' Therefore also a certain sage has said: 'The just man has pity for the souls of his beasts. If therefore of beasts, much more of men.' He (the sage, author of Prov. xli. 10) means therefore that we should exercise a great pity towards brute animals." On that account, therefore, God has instructed the Jews to pity beasts, that they should learn to pity their neighbours, lest, were they cruel to beasts, they should learn to rage against men. This pity God has sanctioned, not only by His word but also by example. For He has a care for beasts. Whence that in Psalm xxxv. 7, "Thou shalt save men and beasts, O Lord," and Christ, as St. Bernard says, was laid in a manger between an ox and an ass, that He should save men and beasts. They imitate, therefore, God and the piety of God who are pitiful towards beasts. Thus St. Anselm, as his Life relates, was moved by the affection of pity towards beasts and bewept them when he perceived them caught in the nests of hunters. About the rest does St. Francis show this sense of pity towards animals, of whom St. Bonaventure thus writes, Book I. of his life, chapter viii.: "By consideration of the first origin of all things, full of a more abundant pity, he called creatures, however small, by the name of brother and sister, because he knew that they had the same origin as himself. Yet he was most affectionately tender towards those which show forth by a natural similitude and by the signification which the Scriptures attach to them the pious gentleness of Christ. He often bought lambs that were being led to the slaughter, mindful of that gentlest of Lambs who will be led to slaughter for the redemption of sinners." Wonderful are the things which St. Bonaventure adds about a cicada, a pheasant, a falcon and wolves, loved and protected by holy men and invited to praise God. In the recently published Life of St. Benedict by the Right Rev. Abbot Tosti are some very thoughtful and beautiful remarks on our relations to the lower animals. Referring to the fact that the hermits and saints of the desert were never attacked by wild beasts, the author says in explanation that as sin has separated man by rebellion from God, so the holiness of the saints by re-uniting them to God restored their empire over the beasts and bound them by paternal love to the inferior creatures subject to God. All this teaching is so diametrically opposed to that of Father Rickaby that I for one reject this latest defence of cruelty to animals from a quarter whence we should hardly have expected it in favour of that of the great Fathers and saints of the Church, whose authority is binding upon us.—Yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

London. Easter Day.

THE "ACADEMY" AND OUR CAUSE.

The following correspondence, which has been handed to us for publication, seems vividly to illustrate the attitude of a newspaper—typical of many—which, after publishing matter in favour of vivisection, refuses to permit the question to be argued in its columns:

"The Ford, Greywell, Hampshire, 22nd of April, 1897.

"THE EDITOR OF 'THE ACADEMY.'"

"SIR,—As Honorary Secretary of the Victoria Street Society for the suppression of the torture of animals, may I ask whether you will open your columns for a controversy on the question of vivisection. I ask this because I notice that already you have allowed us to be attacked in those columns. You will perhaps forgive my expressing surprise that a literary journal should take this course when it is remembered that with hardly an exception all the great names in the world of letters from Dr. Johnson down to Tennyson and Browning have lent their authority to the cause we represent.—I am, Sir, your obedient servant,

STEPHEN COLERIDGE."

"The Academy,' 43, Chancery Lane, W.C., April 25th, 1897.

"SIR,—In reply to your letter, I very much regret that the pressure upon our space makes it impossible for *The Academy* to open its columns to a controversy on the question of vivisection.—Yours very truly,

LEWIS HIND."

THE NEW YORK WORLD AND VIVISECTION.

We have received several copies of the *New York World* of Sunday, February 7th, which, if we remember rightly, has a larger circulation than any other newspaper in the United States (something like seven hundred and fifty thousand), containing, on page twelve, cuts illustrating some of the experiments in vivisection, one representing a dog kept with legs tied and muscles stretched for one hundred and forty-five days; another illustrating an experiment on a dog's throat, etc., etc. The same pictures, with comments, appear in the *Detroit Daily Journal*.—*Dumb Animals*, March 22nd, 1897.

VIVISECTION IN SCHOOLS.

Mr. Geo. T. Angell, the President of "The Massachusetts Society for the Prevention of Cruelty to Animals," publishes the law recently obtained in Massachusetts:

AN ACT

Relating to Vivisection in the Public Schools.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. No teacher or other person employed in any public school of this Commonwealth shall in the presence of any scholar, in said school, or any child or minor there present, practise vivisection, nor, in such presence, exhibit any animal upon which vivisection has been practised.

SECTION 2. Dissection of dead animals, or any portions thereof, in the public schools of this Commonwealth, in no instance shall be for the purpose of exhibition, but in every case, shall be confined to the class-room and the presence of those pupils engaged in that study to be illustrated by such dissection.

SECTION 3. Any person violating the provisions of this act shall be punished by a fine of not less than ten nor more than fifty dollars.

SECTION 4. This act shall take effect upon its passage.

[Approved March 22, 1894.]

THE beauty of vivisection was illustrated before the children of Matteawan, N.Y., recently, when a pet kitten was killed and dissected in presence of the whole school. One or two of the pupils fainted at the sight, but others, of harder stomachs, improved the affair by cutting up a living cat or two shortly afterwards.—*Boston Pilot*.

MR. GEO. T. ANGELL says in *Dumb Animals*, March 22nd, 1897:—"Just before going to press comes to our table the *New York Journal* of February 19th, with two columns telling 'how in a New York School a pet kitten was vivisected by a lady teacher. One little boy vomited, one little girl fainted away, and several of the children were made sick and could not attend school in the afternoon.' This kind of business comes from the *infernal* education now being given so widely in some of our colleges and schools. Under our recent Massachusetts law our *Massachusetts Society for the Prevention of Cruelty to Animals* would make short work with such teachers. God pity the husbands of these female butchers if they ever get any."

THE editor of *Dumb Animals* (New York), says in the issue for March 22nd, 1897:—"The Rev. Dr. John W. Brown, now rector of St. Thomas Church, in this city, kindly permits me to publish the following, which occurred in his own family. A small dog—a great pet—disappeared from the Rectory, then situated not far from a Medical College. At once grave apprehensions were entertained lest this dear member of their household had met a cruel fate. Through a medical friend search was made and the dog was found within the laboratory, emaciated, mangled, in a distressing condition. He was taken home, and the family physician summoned, but the cruel thrust of scientific inquiry had done its fatal work. A bed was placed for him near the fire, and he was entrusted to the kind care of an attendant. But there was another ministering spirit ready with quick divine sympathy—a cat; she stretched herself so that her soft, warm body should afford rest and comfort to the suffering creature. On one occasion when the master of the house visited the dog (in order to give evidence of the cat's devotion), a dish of milk was placed just near where the two were resting, the suffering creature staggered to his feet and the cat (well-nigh incredible to relate) walked beside him, close enough to serve as a support for her feeble charge to lean against while he lapped the milk, the cat not attempting to drink at the same time."

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE IT IS OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, TUESDAY, JUNE 1st, 1897.

OUR ETHICAL PROGRESS.

WHETHER we accept the Moral law as a Divine revelation and take our system of Ethics from the Bible and the Christian Church, or whether we hold with those who maintain, as did HUXLEY, that "the Cosmic process has no sort of relation to moral ends, and the ethical progress of society consists in combating it," we shall find, if we are thoughtful and unprejudiced reasoners, that scientific cruelty to animals is opposed to every ethical system which has been elaborated by religious and moral teachers from the earliest ages to the present time. The merciful treatment of the animal world is as much a law of our nature as is the love of a mother for her child. It is as contrary to the principles of right reason to ill-treat an animal as to torture a man, and no defence can be made for vivisection that could not equally apply to the use of the weak and unsound in mind of the human race for the advancement of science. There is much in the Old and the New Testament to prove that Jews and Christians violate the principles of the founders of their religions when they ignore the claims of the animals to their regard and treat them as "things." MAIMONIDES, the great Jewish teacher, in his "Guide of the Perplexed" (Part III., chaps. XXII. and XLVIII.) says, "It is also prohibited to kill an animal with its young on the same day, in order that people should be restrained and prevented from killing the two together in such a manner that the young is slain in the sight of the mother; for the pain of the animals under such circumstances is very great. There is no difference in this case between the pain of man and the pain of other living beings, since the love and tenderness of the mother for her young ones is not produced by reasoning, but by imagination, and this faculty exists not only in man but in most living beings. This law applies only to the ox and the lamb, because of the domestic animals used as food these alone are permitted to us, and in these cases the mother can be distinguished from the young. The same reason applies to the law which enjoins that we should let the mother fly away when we take the young. The eggs over which the bird sits, and the young

that are in need of their mother, are generally unfit for food. When the mother is sent away she does not see the taking of her young ones, and does not feel any pain. There is a rule laid down by our Sages that it is directly prohibited in the Law to cause pain to an animal, and is based on the words, 'Wherefore hast thou smitten thine ass?' (Num. xxii. 32). But the object of the rule is to make us perfect; that we should not assume cruel habits; and that we should not uselessly cause pain to others; that, on the contrary we should be prepared to show pity and mercy to all living creatures, except when necessity demands the contrary: 'When thy soul longeth to eat flesh' (Deut. xii. 20). We should not kill animals for the purpose of practising cruelty or the purpose of sport." ST. CHRYSOSTOM, ST. ANSLEM, and ST. BONAVENTURE have left on record the tender affection they had for the dumb creatures, and ST. BERNARD went so far as to say that Christ was laid in a manger between an ox and an ass that he should save men and beasts.

It is well to insist on the fact that both by the law of MOSES and that of CHRIST cruelty to animals is a great sin, but it is, perhaps, better to insist on the Natural law preceding and underlying the principles of all the great religions, and which bade men be tender and merciful to animals as to the weak and helpless of their own species. Man is not cruel by nature. Cruelty is a perversion of our nobler instincts. Not teachers, books, nor religions introduced love and mercy to men; they have cultivated these graces, but they were implanted in our nature by the Creator at the beginning.

The crying iniquity of Vivisection lies in the fact that it teaches men to violate one of the highest and noblest principles of human nature; it poisons the springs of humanity and teaches men that for curious and selfish ends their higher nature may be degraded to the level of the ape and tiger nature. If the Cosmos has indeed no relationship to any ethical laws, then as mankind cannot live peaceably and safely without such laws, we must combat Nature as HUXLEY suggests, and subdue it by art and humanize it by ethics. We have, then, the strongest claims on people of all creeds, and of none, to help us in our crusade against cruelty. Men were merciful to beasts before the Law was given to MOSES. The ancient Egyptians, as the monuments prove, punished with great severity a cruel officer who starved some horses to death, and anthropologists tell us that the earliest cave home, where women and children were gathered, sheltered the young of animals killed in the chase, and so brought about the domestication of animals.

We cannot afford to teach cruelty at any price. The nation which tolerates this is doomed to retrogression.

Probably most of our scientific opponents hold Darwin's teaching on the descent of man from lower forms of animal life. But Professor Woods Hutchinson, in his article in the *Monist*, entitled "The Holiness of Instinct," says: "The pedigree of two-thirds of our virtues is far longer than the human race. They are

backed by the inheritance, not merely of our whole human lineage, but by that of our infinitely longer pre-human ancestry. Their strength is drawn from the life of all the ages." Again he says: "Instinct is the crystallized expression of thousands of generations. It is the golden seed-wheat chosen of a million harvests and a myriad threshing floors. It ranks lower than reason because less of individual volition or judgment enters into it; but as a guide it is far safer, as a spring of action far more reliable and effective, and, so far as it goes, has no superior."

We claim that every evolutionist is bound to be on our side, he is far more unscientific in opposing our consideration for the animals and in treating them "as mere things in our regard," than we who deny him the luxury of a free vivisectioning table.

A FRIENDLY PHYSIOLOGIST.

The following important letter from a distinguished professor of physiology was forwarded to us by Col. Waterston, of the Scottish Anti-vivisection Society, and will be read with the greatest interest by our friends who study the scientific aspects of our question.

[COPY.]

Faculty of Physicians and Surgeons,
Glasgow, 26th March, 1897.

Scottish Anti-Vivisection Society.

Dear Sir,—I received an invitation to be present at the meeting of the above Society held yesterday, but feared that perhaps not going *all the way* with you on the subject of vivisection, it might be out of place for me to be there. I observe, however, that notice was taken of my views on "anti-toxin," whatever this may be, and kindred matters, and hence I write this note. With the reservation that *some* experiments on animals may under exceptional circumstances be justifiable, I am distinctly of opinion that the thing is *barbarously* over done, and that in ninety-five per cent. of these operations, the conclusions are *scientifically useless*. Take an example. There is a small body found in the base of the human brain, and in that of other animals, the pituitary body. It is a vestige, remaining to us from a lowly origin of probably millions of years past. Its function, if it have any, is totally unknown. This is so small and so easily escapes the observation of the dissector, bound down as it is and embedded in surrounding issues, *that few medical men have ever seen it*, and yet animals are operated on for the purpose of removing this organ, and the conclusions *which are desired* are drawn from the operation. Difficult to find in the dead subject, how infinitely more difficult is it not to find this little body in an animal thus brutally mangled, with its brains bathed in blood? What earthly value can any sane man draw from conclusions thus obtained. The marvellous thing is that an animal thus operated on is not killed outright. Let any one consider the amount of nervous structure cut and lacerated, and can he wonder that serious and highly complex nervous sequences ensue? A *pathological* condition is thus created, between which, and the *condition of health* there is no correlation, and from which it is impossible to draw useful scientific conclusions. The same remark applies to many other experiments on animals; and in this regard I am in entire agreement with my distinguished friend Mr. Lawson Tait. As to "Anti-toxin" and "Pasteurism," I consider them both scientific frauds; and this is the opinion most generally held now among all but the unthinking *faddists* of the profession.

All the respectable American medical journalists have exposed the fallacies on which they are based, and continue to do so. Unfortunately our medical journals *are less honest*, and they still keep up the imposition for the *sake of the advertisements which they get through it*; with all their pretensions there is much to be desired yet in the direction of honest medical journalism, and I speak from an experience of a quarter of a century on the editorial staff of one of the three leading ones.

The Paris correspondent of *The Medical Brief* (a journal published in St. Louis, America, and one of the ablest and most widely circulated journals in the world) (March, 1897) gives statistics of an unassailable nature showing the utter worthlessness of "anti-toxin" as a remedial agent, and he concludes with the remark, "there we are, while anti-toxin 'keeps on its deadly work.'"

As for *Pasteurism*, the late Mon. Peter (an eminent Paris physician) sums the whole thing up thus: "*Monsieur Pasteur ne guérit pas la rage il la donne!*" Pasteur has given hydrophobia, or something akin to it, to thousands, and in my opinion his treatment has killed many who but for it would now be living.

Do you know of the case of a well-known Glasgow young man, Mr. Stewart, who died during "treatment" (!) in Paris, for a trifling bite from a perfectly healthy dog? Did you notice in the *Evening News*, a few days ago, the case of a man claiming assistance from the Town Council by whom he was sent to Pasteur for "treatment," owing to the shattered state of his health thereby induced, and his consequent inability to work, and the remark of Dr. Chalmers, one of the Sanitary Staff, that the man had "not yet recovered from the effects of the treatment."

Lord Lister has done an immense amount of mischief. He is a germ-theory "Crank." He has for long exhibited an extraordinary credulity with regard to French and German quackeries in connection with the germ-theory, and has been in this country the ever-ready and incontinent sponsor of most of them. With respect to each of them he has out-Heroded Herod, and his incautious and unphilosophical deductions ill-accord with the scientific prudence which one would expect from the President of the Royal Society of London, while they have brought a large amount of ridicule and contempt on medical science.

I am afraid I have trespassed too much on your patience. These are an outline of opinions I hold on these questions, and I care not who knows that I entertain them, and that I am not afraid to give them expression.

I am, your faithfully,

(Signed) D. CAMPBELL BLACK, M.D. F.R.S.E., Professor
of Physiol. in And. Coll. Med. School.

To W. C. Maughan, Esq., Conservative Club.

HOME INTELLIGENCE.

SCOTLAND.

MODERN THERAPEUTIC DELUSIONS.—In his closing address to the students at Glasgow Western Medical School recently, Dr. Campbell Black took for his subject "Modern Therapeutic Delusions." He dealt at length with what he called "Listerism," which he had no hesitation in describing as one of the most humiliating medical and surgical fetishes of the nineteenth century. Nearly thirty years ago he faced the hurricane of its early stage, and now he witnessed its impotent rage behind him. With the exception of one man of robust intellect—the late Dr. James Morton—all the surgeons of the Glasgow Royal Infirmary followed at the heels of Joseph Lister, who had befooled the majority of the surgical world for over a quarter of a century.—*Scotsman*.

MEETINGS AT ABERDEEN.

On Sunday, the 2nd of May, Colonel Waterston addressed meetings in Aberdeen.

MEETING IN DUNDEE.

On Sunday evening, the 9th May, Colonel Waterston lectured in Lochee Road United Presbyterian Church, Dundee, when there was a very large attendance, his subject being "Life," and at the close there was great demand for literature.

Surgeon-General Watson and the Rev. John Baird represented the Scottish Society at the annual meetings of the Victoria Street Society and "The Friends' Anti-Vivisection Society" held in London, the 21st May.

DERBY.

A meeting promoted by the agents of the Victoria Street

Society was held in the Victoria Hall at the Y.M.C.A. on Thursday evening, May 6th. The Rev. J. S. Woof presided over a very small gathering.—The Rev. T. Perkins, of Turnworth, Dorset, spoke of vivisection as being cruel, and referred to the Pasteur Institute as being a "little hell." Vivisection, he said, was immoral from the fact that it was cruel, and he would sooner lay on a vivisector's cloth and be cut up than that an animal should be done in his place.—Mr. T. A. Williams also spoke of the cruelty of the practice, and moved a resolution condemning it.—The resolution was seconded and carried, and the meeting concluded with a vote of thanks to the chairman.

The Rev. J. Perkins having obtained permission to officiate at the usual service held in one of the Midland Railway Company's mess-rooms during the breakfast hour, took for the text of his address Proverbs xxxi. 8, "Open thy mouth for the dumb in the cause of all such as are appointed to destruction," and spoke to an attentive audience of about four hundred engine-fitters of the sin of cruelty to animals, whether inflicted thoughtlessly or maliciously or under supposed interests of science, and he exhorted the working-men, whose votes now ruled England, not to forget the cause of the so-called dumb beasts at election time.

ETTINGTON, WARWICKSHIRE.

The Rev. J. Perkins addressed a meeting in this village on May 7th at the "Friends' Anti-Vivisection Society."

YORK.

ANNUAL MEETING OF THE LOCAL BRANCH.

The members of the York branch of the Victoria Street Society Anti-Vivisection movement held their annual meeting in the state room of the Mansion House on the afternoon of Wednesday, May 5th, the Rev. Canon Fausset presiding.

The CHAIRMAN, in opening the proceedings, expressed his entire sympathy with the objects of the society, and concluded by reading the report of the year's work, from which we take the following:—

During the past year we have had two visits from Mr. T. A. Williams, of the Bristol and Clifton Society. He held several successful meetings in different parts of the city, and roused much fresh interest in the work. In connection with this series Mr. Williams held a concluding meeting in the Corn Exchange. Mr. J. H. Turner presided over an attendance of several hundred persons, it being the largest meeting ever held in York, much interest having been created. During the visit of Mr. Westcott to York, he founded a branch of the London Working Men's Anti-Vivisection Society in this city. It has, however, been thought best to incorporate this with the original York branch, distinguishing it as the B Division, hoping by this means that the influence of the society may be more widely extended. We are glad to announce that Mr. O. F. Pickering has kindly consented to undertake the post of honorary secretary *pro tem*. We thank our subscribers for their valued assistance in the past, and hope for a continuance of the same, as our cash account shows a slight deficiency, the expenses connected with the above-mentioned lectures having been somewhat heavy. Literature has been distributed throughout the city, and much quiet work has been done by members.

Mr. J. H. TURNER moved the adoption of the report.

Miss HARRISON seconded, and the resolution was carried.

The Rev. T. PERKINS, M.A., in an address, argued that vivisection was an offence against morality, and was supported by appeals to human selfishness.

Mr. T. A. WILLIAMS followed, and said that in human development cruelty must ultimately cease. Health could not be won by unlawful means. The growing conscience of men would in time be awakened to the wrong of vivisection.

Mr. W. J. SCOTT moved,

"That this meeting rejoices in the work of the York Anti-Vivisection Society, and pledges itself to do its utmost to remove the cruelty from our midst."

Mr. CLARK seconded, and it was unanimously carried.

Votes of thanks were passed to the Lord Mayor for the use of the room and to the Rev. Canon Fausset for presiding.

The meeting then terminated.

BIRMINGHAM.

MIDLAND ASSOCIATION FOR THE PROMOTION OF KINDNESS TO ANIMALS, AND THE BIRMINGHAM HOME FOR LOST DOGS.

The annual meeting of these Societies was held jointly at the Grand Hotel, on April 13th, Mr. C. E. Mathews, Clerk of the Peace for the City of Birmingham, presiding.

The annual report of the Dogs' Home showed that the number of dogs received during the year ending March 31st was 4,334, of these 257 were restored to their owners, and homes found for 487. Over 300 dogs had been put to death for their owners, and fifty-eight "boarders" had been received.

The report of the Midland Association stated that, in consequence of terrible accounts of cruelty in the Canary Islands, an edition of the Humanity Cards had been prepared in Spanish, and would shortly be ready for publication.

During 1896, 277 circulars had been sent out to clergymen and ministers, asking that they would annually bring the duty of kindness to animals before their congregations, and sixty favourable replies had been received.

READING.

READING BRANCH OF THE VICTORIA STREET ANTI-VIVISECTION SOCIETY.

Mr. T. A. Williams has been delivering some eloquent and telling lectures on the evenings of last week and this week, in the Butts and at the Cemetery Gates, on behalf of the above organization. Discussion has been allowed, and a number of persons have given in their names as members. Mr. Williams has been assisted in his campaign by the following:—The Rev. J. Stratton, Wokingham; the Rev. A. H. Cunningham, hon. secretary, Somerset House, London Road, Reading; and Messrs. R. Carter, R. Jackman, F. W. Paxman, etc. To-night (Saturday) Mr. Williams lectured in the Butts. To-morrow (Sunday) afternoon at the P.S.A., at Broad Street Chapel; and on Tuesday he will speak on the subject at a public meeting in the Schoolroom, at Trinity Congregational Church, Sidmouth Street, Queen's Road, and it is expected that a medical man will be present to give his views on the subject.

ST. BARTHOLOMEW'S.

Through the kindness of the Rev. E. J. Norris (the vicar), a public meeting will be held on Wednesday evening next in the Parish Hall of St. Bartholomew's Church, London-road, on behalf of the Anti-Vivisection Society, at which Mr. T. A. Williams (deputation from the Victoria Street Society) will deliver a lecture.

BRACKNELL, BERKSHIRE.

MEETING ON VIVISECTION.

On Wednesday evening, a public meeting was held in the Victoria Hall, under the auspices of the Victoria and International Anti-Vivisection Society. The chair was occupied by the Rev. J. Stratton, of Wokingham. The lecturer was Mr. T. A. Williams, who gave a very interesting lecture, which was much appreciated by an influential though rather small audience.—The Chairman, in the course of his opening address, said the anti-vivisectionists were told that they were putting back the clock of surgery. Against this he quoted the authority of that eminent surgeon, Professor Tait, who declared that vivisection had led to nothing but blundering, thus showing that the opponents of vivisection do not put the surgical clock back, but would rather wish to regulate it. This was the testimony of an eminent surgeon. There was another from Sir Benjamin Ward Richardson: "I doubt if there is one experiment which is not only useless but positively misleading." In a private letter from Judge Hawkins written to the Chairman, he said, "I should hail with joy its total abolition." So in spite of the anti-vivisectionists being cranks and faddists, they have legal, surgical, and medical testimony in their favour. The Chairman then introduced the lecturer, Mr. T. A. Williams, of Bristol, author of "What I Saw in the Pasteur Institute," who, in the course of an exceedingly eloquent address, requested every one present to realise their responsibilities and help in consolidating public opinion. In answer to the question, What is Vivisection? they were told

it is a question for doctors only, but they all had a right to express their opinions on the subject, and when the true meaning of vivisection was more fully known it would be swept away. Vivisection signified the practice of experimenting on living animals, not only by the knife, but by inoculation. The pain is no more than the prick of a pin, but the after results in many cases are fearful. The lecturer said he had seen with his own eyes over two hundred animals rotting to death in one room. In some cases their eyeballs were eaten away. It was worthy of notice that Professor Lawson Tait speaks in condemnation of vivisection, not on account of the cruelties but on account of the errors introduced by that means into surgical practice. In answer to the question—Is vivisection cruel? the lecturer gave a most touching account of an experiment performed in his own sight upon a large dog, the top of whose skull was sawn off, a brass plate fixed over the gap, and a strong electric current passed through the brain, causing it to kick in agony.—At the close of Mr. Williams' address the following resolution was proposed by the Rev. J. Wesson, and seconded by Mr. Bowles: "Seeing that Vivisection is misleading in its results, inseparable from cruelty, and morally unjustifiable, this meeting records its protest against it, and is of opinion that the practice ought to be prohibited by Parliament." On being put to the meeting the above was carried unanimously.—Opportunity was given for discussion, but no opponent coming forward, the Chairman, in a few hearty words, begged of every one present to do their best for the cause.—A vote of thanks to the Lecturer and Chairman brought the proceedings to a close.

BRIGHTON ANTI-VIVISECTORS.

Under the auspices of the Brighton Working Men's branch of the London Anti-Vivisection Society, a public meeting was held on April 28th, at the Athenæum Hall, North Street, and was fairly well attended. Mr. R. A. Pitter, Secretary of the Parent Society, occupied the chair, and was supported on the platform by Miss Woodward, the Rev. F. Thornton Gregg, B.A., Mr. Arthur Westcott, Mr. T. H. Russell (hon. secretary), and others.

The Chairman said, to anyone who thought deeply upon the subject, vivisection was totally indefensible on moral grounds. They were told that vivisection hardly existed now, but the official returns shewed every year an alarming increase. In 1895, which was the latest year for which returns were available, considerably over 4,000 experiments were made, and nearly half of them without anæsthetics. The only way to get at this crime of vivisection was through political influence. Already they had a few supporters in the House, and they wanted to get more in. There were only two Government Inspectors of vivisection laboratories for the whole of England, and the British taxpayers were simply paying these officials to condone the breaking of the law.

The Rev. F. T. Gregg moved "That this meeting is of opinion that the practice of vivisection is totally indefensible both on moral and scientific grounds, and should, therefore, be entirely prohibited by law." (Applause.) He was glad to be present, and to be able to express his sympathy publicly with the cause of anti-vivisection. The line he took, as a minister of the Gospel, was that vivisection, as such, was contrary to God's Word. (Hear, hear.) He believed that, no matter what good might be derived from vivisection—he denied that any was—they were not justified in doing evil that good might come. (Applause.) He regretted that a large section of the Christian Church took the view that man owed no duty to the lower animals. If a man was by nature cruel and unkind to animals, so he would be, as a rule, to human beings, and he himself had always found that, where a man had in him a trait of kindness and love for animals, that man had in him kindness and love for his fellow creatures also. As a body he believed doctors were members of an honourable and kind-hearted profession, but some of them were so carried away by their love for their profession, and by a desire to make a name, that they performed experiments upon human beings that they were in no way justified in making. If we permitted vivisection on the animal, vivisection on the human being would very quickly follow. (Applause.)

VIVISECTION "MADE IN GERMANY."

Miss Woodward, who seconded, said that vivisection, like

many other things nowadays, was made in Germany, where it was introduced by the Jews in the last century. She contended that in this matter there was certainly one law for the rich and another for the poor, for undoubtedly working men were punished very severely indeed. (Applause.) Out of the 20,000 or 30,000 medical men in Great Britain there were only 213 licensed vivisectors, and therefore she wished it to be understood that it was only a fraction of the profession—the vivisection ring—that she attacked in what she said. They had no wish to be at war with the medical profession, and they had only one accusation to bring against them, and that was with respect to their culpable ignorance of vivisection. (Hear, hear.) Miss Woodward concluded an earnest address by entreating those present to put their shoulders to the wheel and strive against this terrible crime. Especially did she appeal to the working-men of England. (Applause.) Let them make no compromise with sin, for "they enslave their children's children who make compromise with sin."

Mr. Westcott supported, giving his experiences in chemical laboratories. Their hope lay with the working men, and everybody could if they liked do something to forward the cause of anti-vivisection. (Applause.)

Questions having been invited without result, the resolution was unanimously carried.

Cordial votes of thanks to the speakers, and to Mr. Pitter for presiding, concluded the proceedings.

Subsequently a petition, to be presented in due course to the Houses of Parliament, was numerously signed.

ANNUAL MEETING OF THE ELECTORAL ANTI-VIVISECTION LEAGUE.

The annual meeting of the Electoral Anti-Vivisection League was held on May 15th, at 57, Ladbroke Grove, by the kind permission of Miss Fergusson Abbott.

The meeting was an overflowing and enthusiastic one; surely no one went away without resolving to make still greater efforts on behalf of our cause.

The Chairman, J. G. Swift MacNeill, Esq., Q.C., M.P. (our valued champion in the House), made a very able, practical, and inspiring speech, in the course of which he deplored the fact that the press did not report his questions to the Home Secretary on the subject of vivisection; and paid a tribute to the kindness of heart of Sir Matthew White Ridley, but unfortunately he was more or less in the hands of officials. Miss Woodward, our Hon. Secretary, was, however, more than a match for them.

It was very gratifying to hear of the amount of sympathy he had met with on both sides of the House; also what wonderfully open minds are possessed by M.P.'s. with slender majorities.

In conclusion, it was suggested that ladies could do a great deal by ostracising vivisectors of their acquaintance, and by refusing to employ them as medical men.

Miss Linda Paggi followed with a very clear and forcible indictment of Pasteurism, contrasting it with the resuscitated rational cure for hydrophobia, accidentally discovered by Dr. Buisson in 1826, in his own person.

The effect of Miss Paggi's address owed not a little to her beautiful and impassioned delivery.

Mr. R. Somerville Wood made out a very strong case for the National Anti-Vivisection Hospital.

The Chairman then put the following resolutions to the meeting, which were carried unanimously.

The first, to be sent to the Home Secretary:—"That this meeting protests against vivisection being carried on under license from the State, and desires to urge on the Government the introduction of a bill for its total prohibition by law."

The other to be sent to the Member for the Division, W. E. Thompson-Sharpe, Esq., M.P.:—"That this meeting protests against vivisection being carried on under license from the State, and expresses its earnest desire to see the practice totally abolished and prohibited by law."

The second annual report of the Electoral Anti-Vivisection League is a very encouraging document, and shows, that although young, it is vigorous and full of life.

The methods of the Electoral must be admitted to be a great advance.

While not disdaining the lecture, and the leaflets, it holds

the canvass to be the most effective weapon of all. The lecture may be given to empty benches, or to the converted; and the leaflet, though never so cunningly laid in train or steamboat, may be totally disregarded, or simply used to light a pipe: but the Electoral, by carrying this question to the voters' door, has found and developed a hitherto unsuspected amount of sympathy with its objects.

We confidently anticipate that in the near future the Electoral will become a power which all electable persons will have to reckon with.

FOREIGN INTELLIGENCE.

INDIA.

Captain Pirkis has sent the following letter to the editors of the whole Indian Press. We feel sure that our readers will be interested to know of the good work which our indefatigable friend is doing in our Eastern Empire.—ED.

THE BUISSON TREATMENT FOR HYDROPHOBIA.

The High Elms, Nutfield, Surrey.

May 14th, 1897.

TO THE EDITOR OF THE "ZOOPHILIST."

DEAR SIR,—Will you kindly allow one who from the first introduction of Buissonism in this country, eleven years ago, has closely watched its progress, and has verified each case of cure claimed for it, to say a few words in reply to Surgeon-Major Birt's letter which has appeared in several Indian papers.

This letter begins with the assertion that at the time the Government of India sanctioned the placing of twenty Buisson baths in Government Hospitals "reliable information concerning this method of treatment was already obtainable." Here I am at one with your correspondent. It was thus obtainable, although perhaps not from the quarter whence he would desire it—Mr. Horsley's laboratory. Ever since the year 1887 Buisson Baths have been gradually multiplying in India, and when, at the beginning of this year, the Government sanctioned their use in Government Hospitals, no fewer than thirty-nine were established and in full working order in India. Most of these baths are in charge of medical men, who are in the habit of rendering half-yearly returns of patients treated and cured. Some of these returns have been printed, and extracts from them were sent by me to the Government at the end of last year. It can, however, I am sure, be readily understood that the Medical Department at Calcutta should desire to have reports on the matter furnished to them by their own Medical Staff, and hence the sanction for the placing of these baths under the charge of these gentlemen.

Surgeon-Major Birt has not, I imagine, read Dr. Buisson's treatise containing the account of his contraction of hydrophobia and the steady development of true (not hysteric) hydrophobic symptoms. Possibly, also, he has not read of the numerous cases of cure effected by the doctor upon the method by which he cured himself. All this, however, I am glad to say, is now old news to people in England, and when first made known over ten years ago was a means of awakening a deep interest in a method of cure based upon the common-sense principle that in cases of blood-poisoning the first thing to be done is to draw the poison out of the blood, and that by nature's own most simple process of profuse perspiration.

Further on in his letter Surgeon-Major Birt states that "on the appearance of Buisson's report such a simple mode of treatment was eagerly adopted by those called upon to attend these hopeless cases, that all the patients reported by competent persons to be suffering from hydrophobia died in spite of hot-air baths," and that "instances are recorded of the bath causing distress and increasing the terrors of death." These are sweeping statements, and in their present form call not for discussion but for verification. Perhaps Surgeon-Major Birt will be good enough to go a little more into detail respecting them and state who were these hydrophobic persons, when, where, and by whom they were treated, and who were the "competent persons" who witnessed this treatment. Until these questions are fully answered these stories are not worthy of even a passing glance.

The account of Mr. Horsley's experiments upon artificially inoculated animals is scarcely more convincing. Those who discredit all experiments upon living animals, as being not only useless and inconclusive, but absolutely misleading and fraught with ill consequences to the race, assuredly will not have their faith in Dr. Buisson's common-sense remedy shaken by any amount of Vivisectional experiments conducted in the privacy of a laboratory.

In conclusion, may I be allowed most emphatically and indignantly to deny that by advocating Dr. Buisson's humane and common-sense treatment Anti-vivisectionists have placed themselves in an anomalous position. I assert, on the contrary, that they have, if possible, more clearly defined their position in thus rejecting a system, like the Pasteurian, based upon the torture of living animals, in favour of one that was well known and successfully practised in Paris in 1826, revived there in 1851, and in England in 1886, and to which consequently the epithet of "experimental," i.e., the testing of the untried, can in no sense of the word be applied.—I am, courteously yours,

FRED. E. PIRKIS,

Fleet Paymaster, Royal Navy.

RUSSIA.

DIPHThERIC ANTI-TOXIN.

In a recent number of the *Archives des Sciences*, published in St. Petersburg, Dr. Smivnov, the eminent physiologist, describes the result of work on which he has been engaged for the past three years. His object was to discover a ready way of producing a diphtheritic anti-toxin. "The present tedious method is to inoculate horses with the diphtheritic germs, allow it to incubate for some days, and then use the blood serum, containing the attenuated virus for the purpose of inoculating human beings suffering from the malady. Dr. Smivnov has found that if virulent diphtheritic broth cultures be submitted to the action of the electric current an anti-toxin is obtained of great efficacy and capable of protecting dogs from the disease, those animals being, as far as is known, the most liable to succumb to diphtheria. The anti-toxin is, in itself, quite harmless, as its discoverer has administered to guinea-pigs doses ten times as large as that necessary for remedial purposes, and they appeared to be quite unaffected. Experiments are about to be made upon human beings, and if the results turn out to be as successful with men and women as with animals, medical science is to be congratulated upon this remarkable discovery of what we may term the inorganic preparation of an anti-toxin."

GERMANY.

We have received the seventeenth yearly report of the Dresden International Anti-Vivisection Society. There is a slight increase in the number of members of the parent society, and the affiliated societies number thirty-two with about 15,000 members, against twenty-five with about 13,000 members of the previous year. No less than 300,000 copies of Herr Stenz's summary of the proceedings of the Buda-Pesth Congress were distributed, and nearly eight editions of Dr. Paul Förster's address have been sold. The report is full of rejoicings over the success of last year's work.

We have received the Annual Report of the S.P.C.A. of Freiburg-in-Brunswick. We learn from it that the delegate of the Society was among the majority which voted for Dr. Paul Förster's anti-vivisection resolution at the Buda-Pesth Congress. The Society is active and its finances are in a healthy condition. A lady member, who prefers to be anonymous has contributed fifty pounds towards the building of a home for animals.

VIVISECTION IN WÜRTEMBERG.

We learn from the *Thier-und-Menschenfreund* that the Ministry of Religion and Education has communicated to the Faculty of Medicine at Tübingen and the Chief Veterinary School at Stuttgart the following regulations with regard to vivisection:—

(a) Experiments on living animals shall be made only for the purpose of serious scientific investigation, or of instruction in matters of importance. (b) In the case of lectures, vivisection experiments shall be permissible only so far as they are necessary for the proper understanding of the subject matter

of the lecture. (c) It shall be the rule to perform in the absence of the pupils all the operations on the animals, preparatory to a demonstration. (d) The experiments shall be carried out only by professors, teachers and the substitutes appointed as assistants by the directors of the respective establishments. (e) Experiments which, without prejudice to the results can be performed on the lower animals shall not be performed on the higher animals. (f) In all cases where it is compatible with the object of the experiment, the animals operated upon shall be rendered and maintained unconscious by the use of anæsthetics.

Evidently the Ministry of Religion and Education finds it necessary to make at least a pretence of doing something. Unfortunately it is equally evident that this something practically amounts to nothing.

The *Deutsche Reichs-Post* of Stuttgart, the conservative organ for South Germany, publishes a translation of the Victoria Street Society's appeal with regard to the Prince of Wales's project for the celebration of our Queen's Diamond Jubilee.

AUSTRIA.

The first five numbers of *Der Illustrirte Thierfreund* for this year, published in Graz, have just come to hand. The journal deals with many matters, such as bee-keeping, pigeon breeding, etc., etc., which do not greatly concern us. But with Herr Rudolf Bergner, the well-known author of the anti-vivisectionist pamphlet, "Still strong in man is the brute," as editor, we feel that our cause will always be well represented in its pages. Among other things, the journal is the organ of the Austrian Bird Protection Society. It is nicely printed and illustrated, and contains many articles of interest to the student of animal life.

SOUTH AFRICA.

The *Transvaal Critic* of April 2nd, 1897, has the following important account of Kochism in its latest and most unscientific development. If the world had not run bacteriologically mad such cruel and costly experiments would not be possible.

RINDERPEST, 1; THE REST NOWHERE.

"Dr. Koch, having stated definitely 'that as he has discovered a preventive of Rinderpest, which is all that is necessary for immunising cattle,' is now proceeding to Bombay to act as Chairman of the Bubonic Royal Commission. If Rinderpest be permitted to make further ravages in South Africa it will not be his fault. Such is the gospel according to Dr. Koch, and, if it be true, he has indeed earned the eternal gratitude of South Africans, and especially of the farmers, and the Bondmen who, at the recent Congress, refused so much as a vote of thanks to the learned doctor, will have cause to regret their surly action. But it must be confessed that at the present juncture there is, unfortunately, very little reason for joining in Dr. Koch's exultation, and that it would be decidedly premature to substitute his corporeal presence with his sculptured prototype in stone or marble.

Dr. Koch claims to have discovered a means of arresting the Rinderpest by the use of bile taken from a beast that has died of the disease. He wrote on February 10th to Mr. Faure, the Secretary for Agriculture: 'I cannot but urge upon you the importance of bringing this method (bile) to the notice of those cattle owners whose animals are suffering from, or threatened with, the disease; as I am sure thousands of cattle may daily be saved by its application.' This bold pronouncement was no sooner made than inoculation experiments were made in various infected districts, but the results have been, to say the least, dismal. The only report in its favour seems to come from Pretoria, whence a mysterious and quite unauthenticated message was sent to the Cape Government that the experiments in that district had, so far (the 24th ult.) proved satisfactory. But against this there is overwhelming evidence of the failure of Dr. Koch's remedy. Thus, on the 25th ult., it was reported from Kimberley that a beast inoculated by Dr. Hutchens, the Government Veterinary Surgeon, at Pont Drift, near Warrenton, had developed Rinderpest in a serious form and been destroyed. The report from Christiana was still worse, for there inoculated cattle were dying in large numbers from the pest, 'which invariably shows itself on the ninth day after

the operation.' But, perhaps, the most damning evidence of the futility of Dr. Koch's process comes, unintentionally enough, from Dr. Hutchens. This gentleman had made the experiment at Pont Drift already referred to, and he had also tried it on a herd of 150 cattle with, as he was obliged to admit, very partial success, for some died, and many others are showing signs of the disease. With these failures before him, he expresses the opinion publicly that he does not entertain any doubt 'of the efficacy of Dr. Koch's discovery as a preventive, when it is properly applied and the animal is not exposed to infection for several days after being inoculated.' Thus Dr. Hutchens, under pressure of the Government of which he is a servant, and which is extremely anxious, for political reasons, to show that their brilliant idea of bringing out Dr. Koch has not resulted in failure, actually presumes to improve on Dr. Koch's discovery with a theory of his own which is antagonistic to the words used by the discoverer himself. For Dr. Koch, so far from making isolation a condition, commends his bile inoculation to the notice of cattle owners, 'whose animals are suffering from or infected with the disease,' while it is shown that animals, although not exposed to infection in other ways, develop the disease nine days after inoculation.

"Also the Colonial Veterinary Surgeon appears to be blessed with a short memory, for last year, when the farmers were trying all sorts of inoculation, including bile, he pointed out the utter futility of such methods; while it appears that, as far back as last April, Mr. Eagle, of Aberdeen, suggested bile inoculation to the Cape Government. Therefore Dr. Koch was anticipated in this method, and the only progress made is that the Government, including its Veterinary Surgeon, have accepted a fallacious system from Dr. Koch which they refused from more obscure individuals beforehand.

"So much for the Bile theory; we will now proceed to discuss shortly the Serum method, which is also suggested by Dr. Koch, and the discovery of which the *British Medical Journal* attributed to that gentleman. As a matter of fact, inoculation from the Serum was suggested to the Cape Government long before Dr. Koch came to South Africa, by a Mr. Lawrance, whose claim to priority will, I understand, be referred to in the ensuing Session of the Cape Parliament. Like the Bile theory, however, it was rejected; and, indeed, the Cape Government throughout has treated with contempt every suggestion made, compensating for it all by falling flat and prostrate at the feet of the great Dr. Koch. However, as far as Dr. Koch is concerned, Bile has triumphed over Serum, and the latter method is not insisted upon by him.

"But, putting aside Mr. Lawrance, it is proved that the poor deluded (I had almost said demented) Dr. Edington was on the track of the Serum method in November last, that he dropped it and thenceforward devoted his whole time to the discovery of the microbe. He found the microbe, and triumphantly flourished it before the scientific world, and especially before Dr. Koch. Dr. Koch then proceeded to show that the microbe had absolutely nothing to do with the disease, and that the Bile and Serum were the true 'spoons' for tracking the pest.

"It will be seen, then, that with regard to inoculation by Bile, the Colonial Government knew and rejected it, as to inoculation by Serum they knew and rejected it, and that Dr. Koch subsequently, amidst a perfect furore of excitement and official adulation, submits presently similar 'discoveries!' The Rinderpest appeared in Bulawayo early last year. In March the country to the north of Palla is declared infected. The Cape Government does absolutely nothing! In October Dr. Edington turns his attention to the disease, and finds the innocent microbe already referred to. Then Dr. Koch arrives, and gives the Government two theories which the Government knew of months before. He then drops the Serum method and insists upon Bile inoculation. It is, apparently, a deadly failure, and with cattle dying in all directions as a result of the Bile inoculation he departs for Bombay to tackle the Bubonic Plague!

"In conclusion, I may just point out what the Cape Government proposes to do, and the prospects of successfully combating the Rinderpest by such means. In the first place there is the great fencing cordon south of the Orange River, supplemented by the army of guards which is costing £2,000 *per diem*. The efficacy of this means is shown by the fact

that the disease has broken out at Herschel, seventeen miles south of the cordons. I see it stated by a contemporary, however, that Mr. Faure, having departed in great haste from Capetown to Herschel, alarm will be allayed! One might suppose that Mr. Faure, being wholly unendowed with brains, was possessed of some supernatural property with which to drive the disease back to the other side of the cordon! Secondly, the system of bile inoculation is to be persevered in, presumably until there are no cattle left on which to try the process. And after the cattle it will be our turn, for unless Dr. Koch be persuaded, at the eleventh hour, to leave the Bubonic Plague alone, it will make its appearance at Natal or some other part, and then—well, we *shan't* be long!"

We extract the following important and authoritative exposure of Dr. Koch's Rinderpest failure from *The Natal Farmers' Magazine*, April 3rd, 1897.

REPORT BY ASSISTANT VETERINARY SURGEONS STAPLEY AND BAXTER TO THE PRINCIPAL VETERINARY SURGEON ON DR. KOCH'S PREVENTIVE TREATMENT OF RINDERPEST.

SIR,—According to instructions, we visited Dr. Koch at the Experimental Rinderpest Station, Victoria Compound, Kimberley, for the purpose of witnessing his method of inoculating. We were there on the 8th, 9th, 10th, 11th, and 12th of March.

Dr. Koch claims to have discovered that good bile from a beast that has died from rinderpest on the sixth or seventh day from the onset of the disease injected into healthy cattle in quantities not less than 10 c.c., conveys perfect immunity after the lapse of six days. He clearly points out that it is not a curative agent, and that if cattle are exposed to infection just before inoculation, or within six days after the operation, that they will become affected with rinderpest, but the longer the time between the inoculation and the sixth day after, the less virulent the disease.

Healthy animals injected with good bile, as described above, and inoculated six days after with virulent rinderpest blood, even in large quantities, show neither thermometric or constitutional reaction. Dr. Koch obtains his rinderpest blood from cattle affected with rinderpest in the early stages of the disease, when the disease is at its height, and claims it to be the most certain way of producing the disease and, further, that the disease caused by such blood is more severe than that contracted naturally. To prove the immunity of his animals, he not only injects them with this virulent blood, but also puts them in contact directly with animals in all stages of the disease. Frequently the immunised animal stands between two animals both affected with the disease. Experiments to prove at what time immunity sets in gave the following results—the infecting agent used was 10 c.c., of virulent blood.

Gall and blood injected at the same time produced severe rinderpest; blood injected after three days produced a less severe form; blood injected after four days produced a mild form of the disease; while after six days no reaction was observable. Experiments testing whether a gall-infected animal is capable of carrying the disease to healthy, unprotected cattle have invariably been negative. His tests have conducted by freely mixing gall-injected animals at all times after the injection with healthy unprotected cattle, and also the extraction of blood from gall-injected animals and injecting it into unprotected stock-cattle.

To test the time that gall-immunised animals remain refractory to rinderpest, Dr. Koch immunised an ox with 10 c.c. rinderpest gall, and allowed him to remain for forty days without doing anything to him. He then inoculated him with a large quantity of virulent rinderpest blood and exposed him to actual contact with diseased animals, with the result that the ox showed no reaction whatever.

COLLECTION OF SUITABLE BILE (GALL) FOR INOCULATION.

The best is obtained from an animal that has died six or seven days from the evident onset of the disease (rise of temperature), or nine to eleven days from the time of infection. Dr. Koch sets three or four days as the period of incubation. Therefore the best gall is from acute cases, and those living over eight days from the onset of the disease yield a gall which is weaker in its immunising properties. Good gall for inocu-

lating purposes should be limpid, of a beautiful olive-green colour, and practically odourless. Bad gall is of many shades of colour, frequently of a dirty brown-red, thick or muddy in appearance, and is usually fetid; it is uncertain in its immunising action, and at the seat of inoculation—the pectoral region—abscesses frequently form. The percentage of bad galls is large, and we believe that nearly 50 per cent. is not an over estimate. At ordinary temperatures gall remains fit for inoculating purposes about 36 hours, but it can be preserved in an ice-chest for about 10 days. Antiseptics destroy its immunising properties. Dr. Koch has proved that gall preserved with phenol is inert. The gall is collected by placing the animal on the left side and making a semi-circular incision into the peritoneal cavity, through the abdominal wall, following the posterior border of the last rib, beneath which the gall bladder lies immediately. It is firmly held by one man while another takes a scalpel and pierces it, and collects the gall into a clean glass jar as it flows through the wound. A large gall-bladder will yield a quart of gall, sufficient for 100 inoculations. This, however, is the exception, and the average is about sufficient for forty inoculations of 100 c.c. each. The quantity of gall obtained from an animal depends somewhat upon its size and age, and the prevalent idea at the compound is that old cows yield the most. Dr. Koch advises that when good gall cannot be obtained, gall of a slightly suspicious character should be used. Bad gall he advises should not be used.

REMARKS.

Dr. Koch has experimental evidence in support of his statement that gall from rinderpest animals, in a certain stage of the disease, inoculated into healthy cattle, renders them immune to rinderpest six days after, and from that time to at least forty days more. He believes from his experiments that the immunity is of long duration, probably a life immunity. This is unsupported by experiment, as time sufficient has not yet elapsed.

When we review gall-inoculation as taught by Dr. Koch applied to practice, serious difficulties present themselves.

We regard the method of procuring rinderpest gall from an infected troop as a procedure fraught with immense risk, as contamination of the collecting vessel and the person doing the work is extremely probable, almost certain.

The many points requiring care in collecting and inoculating gall make it clear that none but trained, intelligent men should be permitted to conduct the work. To allow men who are without training, who simply have visited Dr. Koch's station at Kimberley—most of them for a few hours only—to collect gall and inoculate cattle, is a course that cannot be too strongly condemned. If permitted, it must lead to disastrous results.

If inoculation is to be added to our defences (it must always be remembered that gall inoculation is not compative), it appears to us absolutely necessary to establish a place naturally well protected, and there to construct suitable buildings and defences to keep within it rinderpest cattle—artificially infected—and there produce a quality of gall possessing the highest immunising powers, excessive care being taken to minimise the risk of conveying the disease outside the infected station.

We have the honour to be, Sir,
Your obedient Servants,
WALTER STAPLEY, M.R.C.V.S.
JAS. W. BAXTER, M.R.C.V.S.L.

17th March, 1897.

REPORT BY THE PRINCIPAL VETERINARY SURGEON TO THE COMMISSION OF AGRICULTURE.

I herewith forward the Report received from Messrs. Baxter and Stapley, Assistant Veterinary Surgeons, having reference to their late visit to Kimberley.

Upon a careful consideration of the whole matter, I cannot advise the adoption of the scheme for the check of Rinderpest by the inoculation of bile until the process has had a more extended trial, and only then under the strictest Government supervision. It is probable that by the injudicious and careless selection of bile the disease might be sown broad-cast. The precautions which are absolutely essential to the safety of the process can only with certainty be exercised by the trained professional man. For this reason I should strongly suggest

the prohibition of any process of inoculation with rinderpest material of any sort, except under strict Government supervision. In the event of the danger of invasion by the disease becoming acute, I should at once advise the formation of a Government compound for the preparation of the bile in sufficient quantities to meet all demands.

An institution of this nature, however, would have to be isolated, and under the strictest supervision, to guard against its becoming a possible focus of infection.

H. WATKINS-PITCHFORD, F.R.C.V.S.,
March 19th, 1897. Principal Veterinary Surgeon.

INDIA.

AGITATION AGAINST A PASTEUR INSTITUTE.

Thousands of copies of Mr. Mehta's paper on "Pasteurism, its Moral and Religious Aspects," were distributed and are still distributed in different parts of the country. Translations in Hindustani, Marathi and other languages, of this paper, are being prepared.

Many of the vernacular journalists were induced to write strongly against the proposed Pasteur Institute.

Travelling agents of the Society are sent in several parts of the presidency, to carry on agitation. Mr. Mehta visited several towns in Gujarat at his own expense and vigorously carried on agitation against the proposed Institute.

A public meeting of the citizens of Baroda was held, by the invitation of the Committee of the Pinjrapôl. Following is a short account of the meeting, which I hope you will insert in journals of your Society.

A large and influential meeting of the citizens of Baroda was held in the Bungalow of the Nagarseth on the 6th of February. Mr. Mayembhai, the Nagarseth (head of the city), was voted to the chair. In the beginning, Dr. Praujpey, L.M. and S., and many other speakers, spoke vehemently against the establishment of a Pasteur or Bacteriological Institute in India. Mr. M. C. Vaidya explained what vivisection meant. The following resolutions were unanimously passed: (1) that this meeting of the citizens of Baroda emphatically protests against the proposed establishment of a Pasteur Institute, arrangements of which are said to be made by the aid of the Government of India, and believes that the people of this country will in no way be benefited by such a house of torture; and on the contrary it will dangerously injure the well-known religious feeling of the Indians, and therefore most humbly requests the Imperial Government to finally abandon the idea of establishing such an Institute; (2) that Mr. M. R. Mehta, Honorary Secretary of the Indian Anti-vivisection Society, be authorized to forward its humblest protest to the Imperial Government against the establishment of the said Institution in India; (3) that this meeting has its heartiest co-operation with the Indian Anti-vivisection Society and resolves to sincerely aid it in every possible way; (4) That in order to carry out the objects of the Indian Anti-vivisection Society, a branch of the Society be opened in Baroda, if possible under the patronship of H.H. the Gaikwar, G.C.S.I.; (5) that a letter of congratulation should be sent to Mr. M. R. Mehta, Honorary Secretary of the Indian Anti-vivisection Society, for his exertions against the cruel practice of vivisection. A vote of thanks to the chairman ended the proceedings.

ANTI-VIVISECTION CAUSE DURING THE BUBONIC PLAGUE.

During the prevalence of the bubonic plague in Bombay and elsewhere, steps were taken to keep the Anti-vivisection cause to the front. M. Yersin and Haffkine's inoculations were vigorously opposed. Through our exertions the people knew very well that efforts of these vivisectionists were only to set up a torture house in India. In the beginning, the people did not understand M. Yersin and Haffkine's motives, but when a pamphlet written by Mr. Mehta was published by the Society, the people understood the object of these vivisectionists. We were able to fix upon the people's mind that serum systems of Haffkine and Yersin were total failures.

RETURN OF LECTURES AND MEETINGS.

The following is a further return of the lectures and meetings, arranged at the instance of the Victoria Street and

International Society, which have taken place as stated below:—

Date.	Speakers.	Place of Meeting.
1897.		
Mar. 18	Mrs. Chas. Mallet	Northern Heights.
" 21	Mr. A. Westcott	Club, Isle of Dogs.
" 21	" "	Sydney Hall, Battersea.
" 22	" "	Liberal Club, S.W. Ham.
" 23	Rev. T. Perkins	Torquay.
" 23	Mr. T. A. Williams	Phoenix Lodge, Birchall Street, Birmingham.
" 24	" "	Good Templars' Lodge, Birmingham
" 24	" "	Five Ways, Birmingham.
" 24	Mr. A. Westcott	Baths, Lambeth.
" 24	Mr. R. S. Wood	
" 25	" "	Institute, Stockwell.
" 25	Mr. A. Westcott	
" 25	Mr. T. A. Williams	Gosta Green, Birmingham.
" 25	" "	St. Jude's Schoolroom, Birmingham
" 26	" "	Bull Ring, Birmingham.
" 26	" "	Gosta Green, Birmingham.
" 27	" "	Working Men's Branch, B'ham.
" 27	Rev. T. Perkins	Max Gate, Dorchester.
" 28	Mr. T. A. Williams	People's Hall, Birmingham.
" 28	" "	Bull Ring, Birmingham.
" 28	Mr. A. Westcott	Radical Club, Wimbledon.
" 28	Mr. R. S. Wood	
" 29	Mrs. Chas. Mallet	B.W.T.A. Meeting, Maidenhead.
" 29	Mr. T. A. Williams	Manchester.
" 30	Mrs. Chas. Mallet	I.L.P., N. Manchester.
" 31	Mr. T. A. Williams	
April 1	" "	Liverpool.
" 2	" "	
" 1	Mr. A. Westcott	Canning Town.
" 2	Mr. R. S. Wood	
" 3	" "	Bristol.
" 4	Miss A. Garland	Labour Church, Hulme.
" 5	Mrs. Chas. Mallet	Socialist Labour Church, Tottenham
" 5	Mr. A. Westcott	Mile End.
" 6	" "	
" 6	Mr. R. S. Wood	St. Jude's Institute, Brixton.
" 7	Mr. A. Westcott	
" 8	" "	Hyde Park.
" 9	" "	Socialist Club, Walthamstow.
" 11	" "	New Tabernacle Church, St. Luke's.
" 12	" "	Mile End.
" 13	" "	Hyde Park.
" 14	" "	Murphy Memorial Hall, Lambeth.
" 15	" "	New Tabernacle Church, St. Luke's.
" 15	Mr. R. S. Wood	Mile End.
" 18	Mr. A. Westcott	Regent's Park.
" 20	" "	Society for Promoting Practical Progress.
" 21	" "	
" 21	Mr. R. S. Wood	Mile End.
" 22	Mr. A. Westcott	
" 25	" "	Hyde Park.
" 25	" "	Progressive Club, Isle of Dogs.
" 26	" "	Mile End.
" 29	" "	
May 1	" "	Hyde Park.
" 2	" "	
" 2	" "	Liberal Club, Brixton.
" 4	" "	Regent's Park.
" 4	" "	Hyde Park.
" 8	" "	Sheffield.
" 9	" "	Doncaster Street Adult School, Sheffield.
" 9	" "	Monolith, Sheffield.
" 10	" "	Rutland Institute, Sheffield.
" 11	" "	Cammell's Iron Works, Sheffield.
" 11	" "	Doncaster Street Hall, Sheffield.
" 12	" "	Sheffield.
" 13	" "	Walker & Hall's Works, Sheffield.
" 13	" "	Sheffield.
" 14	" "	Cammell's Iron Works, Sheffield.
" 14	" "	
" 15	" "	Doncaster Street Hall, Sheffield.
" 15	" "	Sheffield.
" 16	" "	Liberal Club, S.W. Ham.
" 16	" "	Regent's Park.
" 17	" "	Hyde Park.
" 20	" "	Christchurch Schools, Isle of Dogs.
" 21	" "	Hyde Park.
April 5 to May 21	Mr. T. A. Williams	Bradford, Leeds, York, Derby and districts, Wokingham and Reading.

Victoria Street Society
 FOR THE PROTECTION OF ANIMALS FROM VIVISECTION
 UNITED WITH THE
International Association
 FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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The object of the Society is the Total Abolition of the practice of Vivisection as defined in the Report of the Royal Commission.

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SPECIAL SUPPLEMENT TO THE ZOO PHILIST.

LONDON, JUNE 1, 1897.

THE VICTORIA STREET AND INTERNATIONAL ANTI-VIVISECTION SOCIETY.

TWENTY-SECOND ANNUAL MEETING.

SPEECHES OF THE RIGHT HON. LORD COLERIDGE, Q.C., RIGHT REV. BISHOP BARRY, SIR J. BARRINGTON SIMEON, BART., M.P., MRS. WYNFORD PHILIPPS, SURGEON-GENERAL WATSON, CANON PERCY SMITH, REV. ERNEST FISCHER, M.A., DR. BERDOE, AND THE REV. JOHN BAIRD.

The twenty-second annual meeting of the Victoria Street and International Society, held on the afternoon of Friday, May 21st, at the Queen's Hall, Langham Place, London, W., was highly successful. The room was the largest yet retained for this particular gathering, and was nearly full.

The Right Hon. Lord Coleridge, Q.C., who presided, was supported on the platform by:—The Right Rev. Bishop Barry, Sir Barrington Simeon, Bart., M.P., Mrs. Wynford Philipps, Rev. Canon Percy Smith, Surgeon-General Watson, and the Rev. John Baird (deputation from the Scottish Society), Mr. Ernest Bell, M.A. (chairman of committee), the Hon. Stephen Coleridge (hon. secretary and treasurer), Dr. Berdoe, Mr. F. E. Pirkis, R.N., and the Rev. Ernest Fischer, M.A.

In the body of the hall were:—Sir Arthur Arnold, D.L., and Lady Arnold, the Countess of Camperdown, Surgeon-General Thornton, C.B., Mrs. Barry, the Hon. Mrs. Stephen Coleridge, Mrs. Pender, Col. and Mrs. Benson, Miss Ellen Elcum Rees, Mrs. James, Miss Olive S. Bryant, Miss S. S. Monro, Mr. Mark Thornhill, J.P., Mrs. Arthur J. Walter (representing the vice-presidents and committee); also:—Miss Fergusson Abbott, Miss Agutter, Miss Alleyne, Dr. T. R. Allinson, the Misses Amott, Mr. Baldwin, Mrs. W. Baldwin, Mrs. Goring Bankes, Miss C. Barnard, Miss E. M. Beeby, Mrs. Ernest Bell, Mrs. Bell (Forest Hill), Miss Bennett, Miss A. L. Brown, Mrs. Braybrooke, Miss Brice, Miss Burnham, Mrs. G. Earle Church, Mrs. Collison, Miss Corsefield, Miss E. Lowther Crofton, Mrs. A. R. Cunningham, Mr. J. H. Dixon, Mrs. and Miss Hayman Dod, Miss Drew, Mr. Ernest Duffield, M.R.C.S., Miss Elliott, Miss Beata Francis, Mrs. Frances, Mrs. Fowle, Mrs. Gadsden, Miss M. Gordon, Miss Goff, Miss Grainger, Miss Granger, Miss Guthrie, the Misses Radclyffe Hall, Mr. and Mrs. H. N. Hall, Mrs. Hammond, Miss Hardy, Miss C. Hill, Mrs. Horne, Miss Kemp, Mr. J. L. Keys, Miss Lasker, the Misses Law, Mrs. Longlands, Sister Louisa, Mrs. and Miss Mallet, Miss Mackenzie, Miss Matchett, Miss Maudslay, Miss Mayo, Rev. J. Kirk Maconachie (Manchester), Mrs. McKinnel, Mrs. Hy. Melvill, Miss Meyer, Mrs. T. R. Monro (London A.V. Society), the Misses Mortimer, Miss Florence Mulley, Capt. Nicholletts, R.N. and Mrs. Nicholletts (Clifton), Mrs. H. W. Oliver, Mr. C. S. Overy, Mr. F. N. Paget, Dr. Richard Paramore, Miss Paul, Miss E. Watts Phillips, Miss Florence Pierrepont, Mrs. Poole, the Misses Prendergast, Capt. and Mrs. Quintanilha (Newton Abbot S.P.C.A.), Miss C. E. Richards, Mr. G. E. Richardson, Miss Kate Rivers, Miss Maitland Saville, Mrs. Shephard, Mr. H. J. Snow, Mr. J. F. Sparrow, Mrs. Sylvester Sparrow, Mrs. M. G. Starr, Mr. Benjn. Sugden (Manchester), Miss Swifte (Dublin), Mr.

Chas. Newton Scott, Capt. Shawe, Miss Taunton, Rev. Thos. Timmins, Mrs. Launitz Tipping, Miss Edith Ward, Mr. Arthur Westcott, Mr. R. S. Wood, Mrs. Wightwick, Miss A. L. Woodward (Electoral A.V. League), Miss Wemyss (Gloucester), and many others.

The Hon. Stephen Coleridge.

The Hon. STEPHEN COLERIDGE (Hon. Sec.), who was called upon by the Chairman, was received with applause upon rising to read letters of regret for non-attendance, and a correspondence he had had with Sir Francis Knollys (private secretary to the Prince of Wales) with regard to the disposition of His Royal Highness's Hospital Fund. The letters were as follows:—

(From the Hon. Stephen Coleridge to Sir Francis Knollys.)

"20, Victoria Street, London, S.W.

"6th May, 1897.

"DEAR SIR,—I beg leave to forward you a copy of the *Zoophilist* for this month—and I shall be very much obliged if you will at a fitting opportunity draw the attention of His Royal Highness The Prince of Wales to the correspondence therein published concerning the Hospital Fund which has passed between Mr. Burdett, one of the Hospital Fund Committee, and myself as representing this Society.

"The Annual Meeting of this Society will take place at the Queen's Hall, on the 21st of May, when, no doubt, the chief subject for discussion will be the absence of any pledge that the Prince of Wales's Fund shall be precluded from being diverted towards the maintenance of laboratories wherein animals are tortured. It seems a grievous misfortune that any note of discord should not be prevented from arising over the Prince's Fund by this very reasonable pledge being given.

"Believe me to remain,

"Very faithfully yours,

"(Signed) STEPHEN COLERIDGE.

"Sir Francis Knollys, K.C.M.G."

(From Sir Francis Knollys to the Hon. Stephen Coleridge.)

"Marlborough House, Pall Mall, S.W.

"8th May, 1897.

"DEAR SIR,—In compliance with your request, I have laid your letter and enclosure before the Prince of Wales.

"I think you must have forgotten that when I had the pleasure of seeing you and Bishop Barry, at Marlborough House, I distinctly stated, in His Royal Highness' name, that there was no intention of devoting any part of the London Hospital Fund towards the support of the Medical Laboratories.

"I am, yours faithfully,

"(Signed) FRANCIS KNOLLYS."

(From the Hon. Stephen Coleridge to Sir Francis Knollys.)

"7, Egerton Mansions, South Kensington,
"12th May, 1897.

"DEAR SIR,—I am very much obliged for your letter of the 8th of May.

"When Bishop Barry and I had the honour of an interview with you at Marlborough House we certainly came away with the impression that His Royal Highness would not go beyond your letter of the 27th February, which was not regarded as at all reassuring by my committee.

"Our previous distress is a fit measure of our present delight at finding that His Royal Highness will direct that no portion of the Jubilee Fund shall be diverted to the support of the Medical Laboratories, and I am quite sure that this timely assurance will give the greatest satisfaction to the assembled members of this Society at their Annual Meeting on the 21st May.

"I remain, dear sir,

"Faithfully yours,

"(Signed) STEPHEN COLERIDGE.

"Sir Francis Knollys, K.C.M.G."

(Letter of regret from the Earl of Strafford.)

"Wrotham Park, Barnet, Herts.

"May 18th, 1897.

"SIR,—I regret that absence from town will prevent my being able to be present at the Annual Meeting of your Society on Friday, the 21st inst. My opinions have undergone no change, and I continue to sympathise as strongly as ever with this humane work.

"I have to thank you for some interesting information you were good enough to send me contained in the *Hospital* periodical.

"I am, sir, yours faithfully,

"(Signed) STRAFFORD.

"The Hon. Stephen Coleridge,

"20, Victoria Street, London."

(From Sir Henry Hawkins.)

"5, Tilney Street, Park Lane, W.

"May 15th, 1897.

"DEAR MR. COLERIDGE,—I am most flattered by the desire of your Committee that I should attend the Annual Meeting of the Anti-Vivisection Society, for I so abominate the practice of Vivisection that I should rejoice to see it legally suppressed.

"Although you have not as yet succeeded to that extent I am satisfied from all I hear that you have done a great deal of good in awakening the conscience of a multitude of those who were ignorant of the torture to poor helpless creatures, occasioned under the spurious pretext of scientific research—to the abominable cruelty of allowing it to exist.

"I cannot write one half what I feel. I am sorry the rule I have laid down for myself not to attend or take part in public meetings must prevent me from accepting your invitation, and indeed I have not under any circumstances the time at my command to do so. My absence therefore must not be ascribed to indifference, for, from my heart, I wish you every success in the cause of humanity, towards the innocent and unfortunate of God's creatures, in which your Society has courageously and zealously embarked.

"Believe me, dear Mr. Coleridge,

"Very truly yours,

"(Signed) J. HAWKINS."

(From Sir Henry Irving.)

"Lyceum Theatre,

"5th May, 1897.

"MY DEAR STEPHEN COLERIDGE,—Unfortunately I shall not be able to attend the meeting on the 21st, but I am fully in sympathy with its object, and heartily agree with every word of your letter.

"There are some lines of Shakespeare which put the protest of humanity with irresistible eloquence. When the Queen in *Cymbeline* proposes to try the effect of poisons on dumb animals, her physician "Cornelius" answers:

'Your Highness

Shall from this practice but make hard your heart,
Besides the seeing these effects will be
Both noisome and infectious.'

"Ever sincerely yours, with affectionate greeting,

"(Signed) HENRY IRVING."

(From Father Ignatius.)

"I am not able from a scientific point of view, to give any opinion on the subject of Vivisection, but from a Christian and Humane standpoint I should shudder to be in the same company with a vivisector. A man who is able to cut up alive a fellow creature, and feels no pang at its pains, must be worse than a murderer at heart, and no one could be safe if in such a creature's power. The only explanation of such a psychical phenomenon as 'a Vivisector,' to my mind, is, that such an one is possessed with a devil, and can have no part or lot in Jesus Christ the Lord and God of Pity and Love.

"IGNATIUS O.S.B. (Monk).

"Llanthony Abbey, May 18th, 1897."

The reading of these letters was received with outbursts of applause.

The Right Hon. Lord Coleridge.

The CHAIRMAN: Ladies and gentlemen,—My view of the duty of a chairman is that he is to preside and to keep order, and, as far as possible, to hold his tongue; but, perhaps, you will permit me, without really being betrayed into anything like a voluminous utterance, just to say one word to you before I invite the other distinguished speakers to address you. I think that we must congratulate ourselves upon the evidence of public support which we have received from most diverse quarters. You know we are engaged upon a contest which has been waged almost ever since the world began, that is to say a contest between humanity on the one side and between cruelty and indifference on the other. (Hear, hear.) A long time ago the foe—cruelty—represented itself in the aspect of a positive lust for blood. People who were cruel positively revelled and delighted in the cruelties which they practised. I am happy to think that, in England at any rate, this aggravated form of cruelty is gone. (Applause.) We may witness it in savage nations, and I may mention that we may still witness it in a savage nation which inhabits some portions of Europe. We may see it sometimes in children, we may see it occasionally in men. Broadly speaking, although we see it sometimes in the lust of blood shown in bull-fights and other horrors, yet with ourselves those kinds of pastimes have gone. (Hear, hear.) The bear-baiting, the badger-baiting, the cock-fighting, the dog fights—those kinds of things have gone, and although sometimes we may see delicately-nurtured and highly-bred men and women standing round in a ring and watching dogs worrying an otter to death, yet on the whole we do not rush to gloat over the prospect of cruelty and blood. But while that enemy has gone, that form in which the foe appears has gone, the enemy which we have to meet appears in a different and a not less formidable form. We do not see people lusting for cruelty, we do not see people delighting in blood, but what we have to fight against is the inert, heartless, positive indifference, and I fancy that although that enemy is armed with complete steel, we are penetrating and have penetrated into several of the points of his harness. (Applause.)

Ladies and gentlemen, I will tell you my reasons for my faith—that is, that publicity is what the vivisectors fear, and in that terror of publicity I seem to see the proof that the public conscience is aroused, and that they know that the public conscience is against them. (Hear, hear.) Publicity is what we ask. No eye sees the victim under the hands of the operator except the operator himself. No ear except his ever listens to the cries of suffering. No account that we can read is ever furnished except by the person whom we arraign as the perpetrator; and I venture to think, I may be wrong, but while we talk of the reforms of law I venture to think that if once we could get accounts—honest, truthful accounts of what really goes on in the laboratories in the land, there would be no need of law, and vivisection would die on the spot. I am always asked, often asked, "What change in the law do you require? You have had an Act passed to minimize the horrors, that Act is on the Statute Book, what want you more?" I will not now enter upon the controversy as to whether or not that Statute is practically a dead letter. I have a strong feeling upon it, and I have written upon it, but I should like to say this: I should like to say that we want publicity, that we say to the vivisector "Come into the light. Let us have light upon the dark places"; and I would say this: "The law licenses you to

operate, let the law licence me to see you do it." I would ask a very simple thing—that where operations are performed that place should be a public place; that any person with proper testimonials as to his honesty and to his character, whether he is a sympathizer with vivisection or an opponent of the craft, should be entitled at any time to go in and see what is being done; and I venture to think if you could once get that done you would not want any change in the law of the land at all. (Cheers.) That is my faith in publicity. We are always taunted with the fact that we can prove nothing cruel to be going on. (Hear, hear.) If nothing cruel is going on, the vivisectioners need not dread publicity; but if cruelties are being perpetrated, in their antagonism to publicity you may gauge the extent of their dread of the truth. (Applause.)

Ladies and gentlemen, therefore upon these grounds I ask you to support this Society. It is true that we only attack one form of cruelty, but we are fellow-workers with all those who attack any form of cruelty. I am happy to think that we sympathize with societies like the Society for the Prevention of Cruelty to Animals and the Society for the Prevention of Cruelty to Children. We sympathize with those societies, and we hope and we believe that they sympathize with us.

Ladies and gentlemen, if you support this Society you may be satisfied that you are doing something to minimize the great mass of suffering which human beings are always dealing out to animals—a suffering which seems to me to be a wholly unnecessary accompaniment to the supremacy of mankind. (Loud cheers.)

Mr. Ernest Bell.

MR. ERNEST BELL (the Chairman of the Committee), in presenting the report, gave a brief sketch of its contents and in conclusion made the important announcement that the Committee had now under consideration a scheme for the reorganization of the Society, the main features of which were that the supreme authority of the society should be vested in a permanent central council and that the Executive Committee should be elected annually by ballot. It was intended that a special meeting should be held during the summer to place the matter before the subscribers, and the Committee to be elected to-day must be considered to hold office only until the special meeting, when an election would be held under the new arrangement if it was adopted.

The Right Rev. Bishop Barry.

THE RIGHT REV. BISHOP BARRY, who was loudly applauded on rising, said: My Lord, ladies and gentlemen,—The resolution which is put into my hands to propose is as follows:—

"That the annual report be adopted, printed, and circulated, and the Executive Committee reappointed as follows—Mrs. Adlam, Lady Arnold, Rev. J. P. Bacon Phillips, A. A. Beale, Esq., M.B., Ernest Bell, Esq., M.A., Colonel S. M. Benson, Mrs. Benson, Edward Berdoe, Esq., L.R.C.P., M.R.C.S., Miss Rhoda Broughton, Miss Olive Bryant, the Countess of Camperdown, John H. Clarke, Esq., M.D., Hon. Stephen Coleridge, Rev. Ernest Fischer, Hon. Mrs. Arthur Henniker, Mrs. E. M. James, Rev. Lionel Smithett Lewis, Mrs. Leycester, W. S. Lilly, Esq., LL.M., Miss S. S. Monro, Mrs. Frank Morrison, John F. Norris, Esq., Q.C., Mrs. James Pender, F. E. Pirkis, Esq., R.N., F.R.G.S., Mrs. Lloyd Price, Lester Reed, Esq., F.C.S., F.I.C., Miss Ellen E. Rees, George W. E. Russell, Esq., Mark Thornhill, Esq., Dep.-Surgeon-General Thornton, C.B., Mrs. Robie Uniacke, and Mrs. A. J. Walter."

I think that this resolution in itself will require no advocacy from me. You have read the report which is in your hands, and noted the simple and truthful spirit which pervades it; and the names I have had the honour to submit to you are the names of those who have laboured conscientiously in the cause, and in whom I am quite sure the members of the Society will feel confident. Therefore with your permission I will put aside the resolution in itself, and take the liberty of saying a few words on the general subject.

These meetings are, I suppose, intended, first, for consultation among ourselves, and for gaining information upon this

subject, and I quite agree with the Chairman that publicity is the one thing specially needed; next, to consider how we may best carry out the policy we are engaged upon, and gain all the knowledge possible on the matter; and, lastly, to pledge ourselves, and to bear witness to the world, for the cause in which you have engaged. I hope in those respects that our meeting to-day will not be without value. (Applause.)

From the nature of the case it is almost impossible to put our cause in any new light. Our position is unchanged. With regard to the position we hold, in the first place, towards the alleged scientific value of vivisection, it is a position of criticism, and some jealousy—both on *a priori* grounds, considering the great difference that there is between animal structures and our own, and the consequent doubt whether inferences drawn from experiments upon animals are likely to be beneficial for the service of humanity; and next upon *a posteriori* grounds; for we rather doubt whether the plea of justification by results will bear anything like thorough investigation, for we have often heard of great discoveries which after criticism have proved to be, if not valueless, at any rate in the highest degree exaggerated. So towards the scientific aspect of the case we are bound to keep our eyes open, and to look at the matter in each case upon its merits. But our true and primary position in this matter is a position based on a moral ground. (Hear, hear.) Even if we believe that discoveries are of real scientific value, we nevertheless decline to accept that as the primary consideration. We ask ourselves whether we have a right to act so towards these helpless creatures, and if we come to the conclusion we have not a right, then—whatever may be the results—we decline altogether to entertain the practice. I should like you all to understand that in this we are but one of many agencies in a great cause. It appears to me that we are agencies—far be it from me to say that we are the sole agencies—on two most important points of witness. The first is that the supreme element in all true civilizations is not the material or intellectual but the moral element; and that after all, great as are the services of physical science, greatly as we esteem and value intellectual light, yet the one thing to meet all the serious evils of humanity is the moral regeneration of human society. (Applause.) It is the one thing on which we have fixed our attention and which, if we are Christians, we are bound to exalt above every other consideration. This is a principle of the utmost possible moral importance. I think we may say about it that it is seldom or never maintained except by religious inspiration—except (that is) by looking upon this world as under the dispensation of a righteous and merciful God. It is a principle which requires to be very much kept in view at the present time—in an age of great material advance and also of great intellectual development. It is a principle which is universal; it applies to our political and our social and industrial advance, in all that concerns the welfare of our country; it is beyond this, the one consideration we must have before us, that we are raised up to do in the world a great moral work for God, and it is not possible for our own sakes to neglect the mission. Then our second witness is for what is properly called humanity—the self-sacrifice of the strong and powerful for the weak. We are face to face with what we believe to be a form of cruelty, not a form (as your Chairman has said) of wanton cruelty. It is not the cruelty of tyranny or curiosity that we have to deal with, but it is the cruelty which people believe to be justified, and although that form of cruelty, like the religious persecution of days gone by, is not the most wanton, it is sometimes the most determined and most unlimited. Face to face with this form of cruelty, we desire to carry out the victories which have been won in the more general sphere. It has been limited by law. We do not know that the law, even if carried out thoroughly, would succeed in its purpose, but we are quite sure that under the present system, which I think has no parallel in any other department, we have no security for knowing whether it is or is not enforced. We all have some power or influence in respect of law, and therefore we must go on using all our influence to have the law made more efficient than it is now. What we shall do in this respect I do not now trouble you with; because it will form the subject of a later discussion. We are not satisfied with the present condition of the law, and we are going to use all our

power, either through Parliament or any other way, to get that law amended. But our most important work is to raise public opinion. Public opinion is a greater power than law. We have to educate it on this question. In that process we are labouring, not I believe unsuccessfully, but our work is very far indeed from its proper accomplishment. For here we have to face a very great power—the force of scientific authority; but we believe in the greater power of truth and we believe that in the long run our people will go straight towards the right, let the obstacles be what they may. Our business is then to carry out this, as far as we can, and in every possible way, by personal influence, by meetings, and by literature, and then, when we have done this, we may take courage for the future. (Applause.) All I think we have to do is to keep on steadily in the course which has been marked out for us. We need, beyond all other things, to be careful of exact truthfulness; we need next, not to retort hard names, but to speak, as Christians are bound to speak, in the spirit of forbearance. We need, lastly, patience and faith in the principle that we profess. Then whether you or I should live to see it, or not, the day will come when the battle will be won. (Applause.)

Mrs. Wynford Philipps.

Mrs. WYNFORD PHILLIPS, who was warmly welcomed, said: Lord Coleridge, ladies and gentlemen,—This is the first time that I have spoken on this great subject. I am perfectly convinced that the practice of vivisection is based on a misconception of the ways and purposes of life; so, although it is the first time I speak, I am sure it will not be the last. A great many considerations have kept me back from joining this movement; and this very reason makes me hope that I shall meet those who are kept back from the same reason and bring them into the same channel of thought through which I myself have travelled. (Hear, hear.) I am glad to be here to-day for another reason. We are all here grieving for those we have lost—lost in a sense; but the thought of all that they have done remains with us as a deathless inspiration. One of those was my dear friend, Mrs. Massingberd (hear), whose tender heart and loving spirit, which will always be remembered, enabled her not only to help her friends, but also to give her protection to the animal creation; and I, her friend and fellow-pioneer, am glad to think that I may follow where she led. (Applause.) Now many of us are kept back from supporting this cause because we have no scientific knowledge; and we have no desire to place our ignorance against the knowledge of those who have studied science for many a long year. I do not think we should be so afraid of expressing any principle that we see clearly is true, of standing for the truth because we have no knowledge of details. If you have a thought, a beautiful thought, have the courage to express it, and then it will grow into action. It is *Thought* which governs the world. "Thoughts are the parents of deeds and so," Emerson has said, "thoughts are the ancestors of our acts." Engender a thought and express it and that thought will bear fruit in action. Now the basis of our civilization is the thought of duty, of love, and kindness. Be very slow, therefore, before you resort to any course of action that is antagonistic to the duty that we ought to perform. What we all want is to lessen the agonies in the world, the human agony on the one side, and the animal agony on the other; but the way to mitigate one agony is not by creating another agony. Now there is only one way for a person like myself to meet the criticisms that will be levelled against me—not only by many of my scientific friends who have discussed the matter with me, but also by that great public to whom I shall dare to make my appeal—is to do more than justice to the Vivisectionists. That is the only safe way for one who has not studied medical science. I will accept for argument's sake their contention that they have done all sorts of things by means of vivisection; that they have managed to save human life, to keep fathers for their families and mothers for their children; that hydrophobia has been cured by the torture of endless dogs and cats. But, if that is all, the remedy is a thousand times worse than the disease. (Hear, hear.) It is a very poor conception of human life that seeks its remedy from the

torture of others. On every battlefield there is a father who may say, "I ought to go home to my wife and family"; but instead of that he dashes amongst the deadly fire to rescue the drummer-boy, and, after rescuing him, loses his life and lies dead upon the battlefield. Is he not a better father and a better husband living in the memory of those he has left behind, by acting in such a way, than to have kept his life for the sake of those at home? If you love people you can do no better. Longfellow has told you "there is no death;" and even Shelley, the great moral reformer, said, "Die if you would be with that which you would seek." What you yourself would gain by doing a wrong thing is not what you would advise when your judgment is clear. We have to determine what is right to be done and then when temptation comes before us—and the temptation is always present when our loved ones are suffering—we can hope to have the strength to be able to resist it. (Applause.) Now there are two methods in life, and in all departments of life, of meeting evil. The longer I live the more clear am I as to the method that I myself shall try to follow. There is the method of meeting evil hand to hand; there is the other way of prompting the good. Do not keep arguing against the evil. There are three reasons against vivisection. One is, that the knowledge attained thereby may be gained in some other and better way; another, whether it is not a leading away from the wholesome methods of hygiene; another, if you must do it, that it is no good to save your body if you lose thereby your soul. To put it in more practical words—the use is uncertain, the abuse is quite certain, and, anyway, it leads in a wrong direction. If you say that animals are here for our use you still have a duty to perform towards them. We do not torture each other and therefore we do not want to see our poor dumb creatures tortured. Bull-fights are not now permitted, cock-fights are not permitted; yet in our day we have the worst cruelty of all—vivisection—to contend with. Never let us be afraid of inconsistency; I shall only be afraid of being consistently wrong. It is the phantom of inconsistency which makes people afraid. It was the phantom which frightened me, but I hope that I shall in this way be able to prevent other people being haunted by the fear of inconsistency which really keeps them from doing a service which they otherwise might render. Do not be afraid of being inconsistent for this reason. If you are afraid you may be consistently wrong, remember nobody can be consistently right. That is not a gift which any human being possesses. Have the courage to be consistent. Do what you think is right and be prepared to go on with your intention. Do all that is noble and pure, and do it calmly and peacefully. What we want is knowledge, and you must do your best to strive and attain that knowledge. (Applause.)

Sir Barrington Simeon, Bart., M.P.

SIR BARRINGTON SIMEON, Bart., M.P., who was cheered on rising, said: My lord, ladies, and gentlemen—I shall not detain you very many minutes because I am thankful to say I am not an expert in the matter of vivisection. I know very little about it, but I know quite enough to give me a very strong opinion against vivisection. There was one thing that I heard to-day that rather made me sorry—I hope it is not correct—and that is, that the present Parliament is less opposed to vivisection than the late Parliament. I really hope that it is not so, and I do not think it is. (Cheers.) What I believe is the right explanation is that the present Parliament does not know much about it. I never heard of this Society until the other day, when a political opponent, but a personal friend, came to me and said "Will you come to our meeting and say a few words," and I replied "By all means." I asked the next member of Parliament I met "Will you come to a meeting about anti-vivisection." He enquired "When is it." I answered "Next Friday." He said, "I would if I possibly could." I believe if we can keep on and approach all the members like this it will be found that Anti-vivisectionists are stronger in this Parliament than they were in the last. (Cheers.) Ladies and gentlemen, I was asking a friend of mine, who is a vivisectionist, the reason why he approved of it—he is not a doctor—and he replied, "It is

absolutely necessary." I rejoined, "Very well, why is vivisection right when cruelty to animals in any other shape is wrong?" He answered, "Human life is so much more precious than animal life." I asked, "Why?" and he replied, "Because we have got immortal souls and animals have none." I said, "If ever a fellow knocked his own argument head over heels you have done it this time." We are supposed to live three-score years and ten if we are fortunate in this world; but a dog lives only ten or twelve years, and yet we are supposed to be going on for ever with our immortal souls in happiness and comfort—I hope we shall—but not so the dog. As soon as he is dead he is done with. I am not the least sure that the dog will not come too. (Cheers.) It has never been proved to me otherwise yet, but if he is not to come with us, what is the duty for us lords and ladies of creation? When we have done with our three-score and ten years here we are to go to Heaven and get more and more happiness. Is it not clearly a duty of ours towards the dogs which live so short a time to provide for them in the best possible way? Have we any right to change our life from three-score years and ten into three-score years and fifteen by torturing our four-footed friends? (Cheers.) As we may be going to everlasting happiness presently, is it right to make the cat and dog miserable during their short time here? It seems to me that my friend's argument clearly knocked itself head over heels. Now, ladies and gentlemen, I only wish to say, if I may say so, I have never been here before, and I knew very little about the society till I read that admirable report late last night, and, of course, if I am allowed to become a member of the society I will do so (cheers); but I may say [that the one thing for everybody to do is to see that animals are as little tortured as possible, but if we go too far or too fast we may drive this vivisection more down, and more into the dark than it is now, and we may possibly hurt the animal more than he is hurt already. I only wish to bring that to your mind; it is very strongly in mine. I am certain you, ladies and gentlemen, who know more about this subject than I do, and who have had the honour of being members of this society for a long time, will do everything that is careful and tactful in that matter. (Loud applause.)

The CHAIRMAN put the first resolution to the meeting, and upon a show of hands being taken, it was declared carried unanimously.

Surgeon-General Watson.

Surgeon-General WATSON: My lord, ladies, and gentlemen,—just before I entered, I was asked whether I thought we would succeed in converting a majority of the people of England to our views? I said I thought we would, though at present we had against us the greater part of the medical profession and of the population generally. Other good causes have succeeded which at first had even fewer adherents than we have. In 1787, when Thomas Clarkson and Granville Sharp proposed the abolition of slavery, there was a great outcry against them, and a great writer wrote that the abolition of slavery, which God had sanctioned, would be not only robbery of our fellow-countrymen engaged in the slave trade, but also extreme cruelty to the African savages—and yet slavery was abolished. (Applause.) In 1832, when the abolition of child labour in factories was proposed by Thomas Sadler and Lord Ashley, the mass of people were against abolition, and a Royal Commission reported that restrictions on child labour would put the mill-owners at the mercy of foreign competition; yet child labour in factories has been abolished. (Applause.) In his old age, Lord Ashley was interested in the cause of anti-vivisection, and a story is told of him that, hearing of a vivisector's cruelty, he said, "By God, I could hang him with my own hand!" Now-a-days we seldom hang people; but a poulterer, in the South of England, lately got six months' in jail for plucking fowls alive. (Cheers.) We will agitate till medical men in laboratories are treated exactly like poulterers in shops. (Renewed cheers.) When this is the law of the land, I will venture to parody Lord Ashley, and say, "Verily I could lock him up with my own hand." I will take the post of turnkey, though I might hesitate about hangman. (Applause.)

The CHAIRMAN here read a telegram addressed to him, "Collection at Cantley Church yesterday for the Society—£4 1s. Hope other clergy will do likewise. Otley, Vicar." (Loud applause.)

The Rev. Ernest Fischer.

The Rev. ERNEST FISCHER said that a short time ago a petition was signed by 183,706 inhabitants of London to the Home Secretary, praying him to refuse to grant a licence to the British Institute of Preventive Medicine. This was the largest petition filed since the days of the Chartist, which went to prove that the cause which the Society had at heart was making progress. He did not wonder at that, for he believed that the cause the Society for the suppression of vivisection of animals had at heart, was the cause of humanity, of morality, and of justice, but what he wondered at sometimes was that the cause should need pleading at all, as he thought the whole nation should rise to a man, and say with a voice like thunder, "This infamous practice shall not go on." (Applause.) He thought the indifference which one met with when trying to gain converts for the cause did not always arise from want of sympathy with the poor animals, but was largely due, in nine cases out of ten, to misconceptions upon the subject. One of the misconceptions he believed to be the old argument that it was absolutely necessary in the interests of physical health that vivisection should be carried on. If that misconception were removed there would be no difficulty in sweeping vivisection into the darkness of oblivion, which was its proper place. (Applause.) It must be inhuman selfishness which would inflict a hell of pain upon dumb animals to provide an escape from its own share of pain. So much for the moral aspect of the question. The most dangerous misconception, however, to grapple with was the widely-spread error that the practice of vivisection, as carried on in England, was free from the charge of cruelty, because the Vivisection Act insisted upon the use of anæsthetics. In exposing this fallacy, he maintained that this Act of Parliament was one of those Acts through which any skilful driver could drive a coach and four with the utmost ease. (Applause.) He had the testimony of vivisectionists themselves, who were honest if they were cruel, who said that pain was inflicted even when anæsthetics were used. Mr. Victor Horsley, a man much honoured among vivisectionists, says, "I do not say that there is no pain in vivisection, it often involves the infliction of much pain." He begged everybody to tell those whom they met what Mr. Horsley had said. "Much pain!" He should have said "a hell of pain!" When "much pain" was inflicted upon animals when they were under anæsthetics, what must the pain be when they are simply under narcotic drugs which are not anæsthetics at all? The word anæsthetics itself was simply a wide gate left in the Act for the vivisectionist to drive his funeral procession through with his hearses and his mourning coaches full to the roof with unfortunate tortured animals. One of the most commonly used drugs was morphia, but morphia was not an anæsthetic, it was simply a narcotic drug, and a great French vivisectionist, Claude Bernard, had said that a dog placed under morphia felt the pain, but had lost all idea of self-defence. "He lies quite still, and lends himself without a movement to the most delicate operation." There were at that moment 145 licensed operators in England and Scotland who could perform experiments without the use of anæsthetics; and, according to the report of the Government Inspector in the year 1895, 3,110 experiments were so performed. No words were deep enough to express the world of misery, the world of suffering, which lay beneath those 3,110 experiments, which cried aloud for the total abolition of vivisection. Here were 3,110 tongues pleading for mercy, pleading for protection from the hands of these cruel tormentors. He wished, in conclusion, as a minister of the Gospel, to refer to that marvellous chapter, the 8th of the Romans, where that inspired animals' friend, St. Paul, poured out his sympathy with the animal world. There was one passage he could not read without thinking of their great and glorious cause. "The creature waiteth for the manifestation of the sons of God." He fancied he could see his poor dumb friends writhing in the grip of this Satanic Science, torn to pieces, cut up, disembowelled, mutilated in

every conceivable way, looking up with dying eyes in the faces of their tormentors and saying, "Is this the manifestation of the sons of God? or is it the manifestation of devils from the lowest hell?" He (the speaker) heard the voice of creation praying, crying for mercy for life, and saying, "Are there no humane men, no 'sons of God,' to plead, not for mercy, not for pity, but for our sacred rights?" (Applause.)

Dr. E. Berdoe.

Dr. E. BERDOE: I shall not detain this meeting more than two or three minutes. I have some good news to give you. I am pleased to tell you that we have not had, during the past year, notwithstanding all the promises of the experimenters, to recede one single step from the position that we have always taken, which is that what is morally wrong cannot be scientifically right. There has nothing happened in all the world of discovery, research and experiment, to cause us to surrender one inch of our territory or one stone of our fortresses.

Dr. Berdoe then read several extracts, after which the second resolution was put to the meeting as follows:—

"That this meeting affirms the impossibility of any adequate protection from torture being afforded to animals under the present law, and therefore declares itself in favour of the total suppression of vivisection by Act of Parliament."

A show of hands being taken it was declared carried unanimously.

The Rev. John Baird.

The Rev. JOHN BAIRD said he felt it a very great pleasure to be present at the meeting, practically as a spectator and he wished to express his great regard to them for the honourable way in which they were conducting this all-important work. The greatest pleasure to him was to propose a hearty vote of thanks to Lord Coleridge for presiding. (Applause.) He was a gentleman who bore an honoured

name (applause), and was one he was sure who would nobly fill the position which he occupied. He had lent himself to a cause that was not likely to decay or collapse (hear, hear), but from the tone of the speeches delivered that afternoon was in a state of lively activity, and full of highest promise for the future. (Applause.)

Canon Percy Smith.

Canon PERCY SMITH, who was applauded on rising said, in seconding the resolution, that they must all feel deeply indebted to the noble chairman for the very great personal interest he had always taken in their cause, and for his admirable speech that day. He wished to concur with the chairman in what he had said, especially as to the desire for publicity. It was a matter of regret to himself and others that there were not more of his profession present, but perhaps they did not know of the odds and ends that a hard-worked clergyman had to attend to. The reason many of the clergy did not take a personal interest in their cause was from knowing nothing about it. He pleaded guilty to the same thing himself, but he had a very good defence for his own ignorance. He met a distinguished and most charming physician some time ago, and he said there was no suffering in vivisection to speak of. If a distinguished physician could say that, they could not blame the poor simple parsons who believed the same thing. Those who had attended that meeting would know otherwise. He had listened very attentively to the speeches that afternoon, and he envied any one who could carry away in their mind one-tenth part of the wisdom they had heard. (Hear, hear.) He must support the plea for greater publicity. He believed vivisection would be practically, if not altogether doomed, or its end drawn nearer, had women the votes they ought to have. (Applause.)

The CHAIRMAN having replied, the proceedings terminated, and the company adjourned to the conservatory, where tea and coffee had been again provided by Mrs. Arthur J. Walter.

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVII. No. 3.]

LONDON, JULY 1, 1897.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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“SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION.”—MR. LAWSON TAIT, in a letter in “*The Times*,” November 8th, 1892.

NOTES AND NOTICES.

OUR readers will be glad to know that Mr. J. Galloway Weir, M.P. for Ross and Cromarty, read to the House of Commons, on Friday, June 18th, in the debate on “Supply,” extracts from a letter by Dr. Berdoo, published in the *Echo*, June 12th, which pointed out how morphia and curare are being employed by the Vivisectionists in place of true anæsthetics as required by the Act. The Home Secretary disputed the charges and demanded proofs of the allegations made (see *Times* report, June 19th). Dr. Berdoo at once forwarded proofs of his statements from the *Journal of Physiology*, both to the Home Secretary and to Mr. J. G. Weir. We await the result with interest.

IN the House of Commons on May 26th, Mr. Hutton presented a petition from the inhabitants of Carperley, in a meeting assembled on the 23rd April, 1897, Thomas Bradley, chairman, praying for the total prohibition of vivisection.

THE Antiseptic treatment is something for our opponents to conjure with at meetings. Of course it is

declared that its discovery was all due to experiments on animals. Let us see how far this is true. We have always maintained that Listerism is nothing more than surgical cleanliness—the cleanliness of the dairy-maid applied to the operating room. In the *London Hospital Medical Gazette* for May, p. 4, there is an article on “The old and new operating theatres at the London Hospital.” In the old theatre, it is stated, that the operating table of wood was “of fabulous age.” It was sometimes thought necessary to have a new mattress for this table, this was when “the stuffing was found to be matted together in lumps by the blood which had during many years soaked through its covering. The only correct garb of the surgeon was a frock coat (the oldest and shabbiest in his wardrobe) which was kept in the Surgeons’ Room, and never renewed or cleaned during his twenty years of operative work.” Can we wonder that such neglect of the commonest sanitary precautions ended in blood poisoning and death? Would any housewife have tolerated such a state of things?

BUT still worse things happened. We are told (p. 6) that the operating theatre attendant was permitted to employ his spare time in the post-mortem room, the surgeons came straight from the dissecting room to operate after simply washing their hands; ligatures were used which had been already soiled by handling with blood-stained fingers to sew up wounds on a second case. Well may Lord Lister say he is ashamed he ever used the carbolic spray; says the writer of the article we are quoting: “How well one remembers the numbing spray of one in forty carbolic, that caused anæsthesia in the surgeon, and pneumonia in the patient.” Experiments on animals gave us this deadly spray; common-sense cleanliness gave us Mr. Lawson Tait’s splendid results with “common tap-water.”

GIVE a microbe a bad name and kill it. It may be as innocent as the slandered dog so treated, it may even be a benefactor of humanity like the bacterium *staphylococcus*, which has so terrible a reputation that the bacteriologists have incessantly pursued it with carbolic acid and Condy’s fluid to destroy it withal, and now Dr. Stoker comes along with his oxygen cure, and tells us that he has discovered the staphylococcus to possess a power highly favourable to the healing of wounds. And we have made Lister a lord for destroying our greatest surgical friend!

THE *Echo*, June 17th, is responsible for the statement that a Dr. Richardson, a member of the medical profession, an educated and intelligent man, recently

"sustained injuries which were not serious by falling off his bicycle, and he might easily have recovered from them if he had not taken up a feverish idea that they would produce lockjaw. He was progressing favourably until the third Sunday in April, when he announced to a brother physician that he would have lockjaw during the week, and would die of it on the following Sunday. Despite all attempts to persuade him that the idea was absurd, *he insisted on being treated with anti-toxin*. If this had any effect at all, it seemed to increase the power of his imagination, and bring his weakened body still more completely under control of his mind. As a result, he developed alarming symptoms on the last Thursday in April, and it became clear he would not recover. *He died on the day he appointed*, and of lockjaw, as he had predicted! He thought himself to death."

THE "*Vossische Zeitung*" (Berlin) learns from Vienna that Dr. Wilkins, professor of animal physiology, has committed suicide by shooting himself. It is added that he was suffering from an incurable disease."—*Reuter*. (Berlin, June 10th.)

A SINGLE line in a medical report will sometimes convey to us a world of meaning. For example, in an article on Diabetes in the *British Medical Journal* for June 12th, 1897, we note the following, "The authors have also experimented on the effect of the extract on *diabetes artificially produced in various ways both in men and animals*" (italics ours).

DR. LUTAUD, editor of the *Journal de Medecine de Paris*, says, "It is interesting for an unbeliever to watch the terrible struggle now going on between Behring and Roux. That is to say between the German and the French merchants of serums." Without question this has now become a mere mercantile war. There are now so many competitive serums that the anti-toxin mongers of the Pasteur Institute threaten to swallow up the whole pharmacopœia and confiscate the science of therapeutics for their own profit. The Germans will not easily be beaten on their own ground. Koch has brought out a new edition of his tuberculin "revised, corrected, and brought up to date." The world loves quackery, and now that science has made a *mésalliance* with it, honest practitioners will find their craft in danger.

"WHAT was the sole joke of Thucydides?" is a Browning conundrum usually considered insoluble. The sole joke of the physiological laboratory, so far as we know, was broached at the lecture by Dr. Berdoe at the North London Natural History Society's meeting, reported in another column. Dr. Gerard Smith told the audience that there is mercy sometimes in the vivisector's laboratory. He was, when a student at a famous hospital, assisting a very eminent experimenter engaged in trying how long a number of dogs could be kept alive on gluten alone. The experimenter made the unexpected discovery that the animals thrived amazingly on the strange diet, and naturally was very proud of the chance of demolishing the conclusions arrived at on the matter by previous researchers; always an eagerly sought-for opportunity in an experimenter's career. The great man, however, does not know to this day that his pupil gave the poor dogs a good meal of Spratt's dog biscuits every evening when the experimenter had left the laboratory for his residence!

THE *British Medical Journal*, in its Jubilee Number, June 19th, has an article on "Vivisection during the Queen's Reign," with a half-page illustration reproduced from *Punch* inscribed "Science and Stupidity." A party of fierce-looking vivisectors are at work at a small table, on which is an enormous frog, who is about to be dissected alive by one of the Professors. Close to the animal is an immense bottle of chloroform, big enough to drown the frog and all its family. The operating Professor says: "By this experiment we have ascertained that we can alleviate the sufferings of thousands of our fellow-creatures. I may further add ———!" But to him enters a bull-headed, snub-nosed policeman, with the Vivisection Bill in his hand, who exclaims, "No, you mayn't! We've had enough o' this sort o' thing; you must move on!" Professor: "Move on, we can't *move* on if *you* interfere!"

THE Editor of the *Journal* is good enough to explain that "the aspect and attitude of the policeman fitly symbolize an ignorant and uneducated opposition, and contrast well with the refined and sympathetic figures of the scientific men he is obstructing." With the exception of the one seated figure, which we are informed is that of Mr. Ernest Hart, and whose face is gentle and intellectual enough, we should have thought that Sir John Tenniel had essayed to portray a group of typical vivisectors, and had succeeded. For our own part we reject the policeman as a type of our own party, because we feel sure "the force" would indignantly repudiate the figure as a libel on their order.

THE pearl of the article, however, is the description of the frog. Our scientific *British Medical Journal* explains "That the intended victim should be a frog is only fitting, for the Act in its wisdom permits the vivisection of *invertebrate animals* without the necessity for a licence." *Et tu Brute!* The *Lancet*, a few years ago, called the frog an invertebrate, but that Mr. Ernest Hart, the "refined," "scientific," "ablest advocate of vivisection" (see *British Medical Journal*, p. 1576), while occupied in denouncing us as "an ignorant, uneducated opposition" under the legend "Science and Stupidity," should make such a mistake, makes us wonder on which side lies the science, on which the stupidity. We forgave the *Lancet*, we never expected science in that quarter; but the *British Medical Journal*!—we can never trust it any more.

IN the article on "Physiology," the *British Medical Journal* (June 19th, p. 1541) says: "To-day, though we have a Vivisection Act in operation, but few physiologists have had cause to grumble on this score, for the Act has been administered by successive Home Secretaries with wisdom and fairness." Yet we are constantly told that our opposition is responsible for retarding the progress of science in England, and compelling its medical workers to lag far behind their continental brethren.

As an instance of the brilliant and refined writing that adorns the chief medical newspaper of this country, we give the following quotation from an article in the *Lancet* attacking our Honorary Secretary:—

"He has been guessing and gassing, and has not the grace to turn off the tap when his neighbours object to the smell." We hope the medical profession are proud of the good taste of their organ!

DR. STOKER has invented a method of healing ulcers and indolent sores by the application of oxygen gas in an air-tight vessel direct to the wounds. Old men and women amongst the working classes suffer greatly from this class of disease; when at rest in hospital they soon begin to mend, but relapse quickly on resuming their usual employment. If Dr. Stoker's invention answers its present promise it will prove an incalculable blessing to thousands of poor old people.

THE Princess Louise recently opened a special small hospital wherein the new process can be tried. But why was it necessary to open a special hospital for this harmless and important experiment? No doubt because at the great teaching hospitals it has been coolly received. It is only a healing process without chance of much kudos to the surgeon. There is nothing dashing and brilliant about it. A bold, daring assault upon the human frame which has been practised in the laboratory and then transferred to the hospital ward may bring honour and emolument to the operator, but a simple method of this oxygen character can do nothing for the surgeon, though it may mean much to the patient.

ENTHUSIASM in medicine seems only born in the torture-chambers of science. Emanating thence the new discovery is born with a silver spoon in its mouth. Science has taken it by the hand, its early steps are guarded with care, its failures all suppressed, its poor successes trumpeted over the world; but a new beneficent clinical discovery is only a poor man's brat, "born in a garret and in a kitchen bred."

THE *Hospital*, a semi-medical paper chiefly patronized, it would seem, by nurses, who are provided in its pages with a pre-digested kind of medical pap suited to feeble assimilative organs, is very angry at the notion of an anti-vivisection hospital. It "assumes" that "the proposal for the new hospital is made seriously, and not as a mere attempt on the part of knaves to wheedle money out of fools."

AFTER this bit of vernacular the editor lapses into science and assures his readers that everything of importance in modern medicine and surgery is a direct result of experiments on living animals. We are then treated to the following rodomontade:—

"If the managers of the new hospital are to be consistent, all this knowledge must be repudiated. Arterial bleeding must be dealt with by hot iron. Aneurisms must be suffered to enlarge and to burst without restraint. Compound fractures and operation wounds must no longer be treated antiseptically. The increase of mortality, alike in patients who were treated by fourteenth century methods, and in those who were not treated at all, would be likely to give rise to curious inquiry on the part of coroners; and, even if the hospital managers permitted the employment of knowledge which had been acquired prior to the opening of their institution, they would soon be placed in difficult positions by neglecting to avail themselves of that which was acquired afterwards. Suppose, what is quite possible, that a method of curing cancer were to be discovered and established by experiment, and that the patients in the new hospital were systematically suffered to die for want of the application of the remedy."

SUCH reasoning can deceive nobody. Knowledge once really gained is the inalienable possession of the race and can never be surrendered, even though the methods by which it was originally gained were

illegitimate. Astrology was the parent of astronomy; alchemy the mother of modern chemistry. Astrology was largely mixed with fraudulent fortune telling, and alchemy was but a glorified greed for gold where it was not simple cheating, yet both pseudo-sciences taught the world some valuable lessons which could not be forgotten even if it were desirable to ignore them.

THE *Hospital's* examples, however, are the outcome of ignorance, as we shall proceed to show. "Arterial bleeding must be dealt with by hot iron." The writer can hardly have read his Celsus, who writes at length (he flourished B.C. 50 to A.D. 7) on bleeding and describes the double tying of arteries and the division of the vessels between the ligatures. Galen (born A.D. 131) describes the ligature of arteries, and Archigenes (A.D. 100) tells us how to arrest bleeding by tying or sewing up the vessels, and a pair of forceps is exhibited at Naples which was discovered at Pompeii and was certainly used for taking up an artery. Rufus of Ephesus practised the twisting of arteries for arresting hæmorrhage, a method universally followed at the present day. It is true that the actual cautery was employed when these ancient methods had been allowed to fall into disuse. The present practice is but a recovery of the older method. But the burning with hot metal is even now employed. The *Hospital* has evidently forgotten the electro-cautery.

ANTYLLUS (circ. A.D. 300) tied the artery for aneurism above and below the sac and evacuated its contents so that we shall not allow our patients to bleed to death even if we do discard the knowledge Hunter (it was not much after all) gave us on aneurism. Antisepticism is merely surgical cleanliness plus coal tar, and Hippocrates used that for the treatment of wounds. How we shall comport ourselves in the presence of a cure for cancer discovered in the pathological laboratory may require some consideration. It will be so startling to find that at last the vivisectors have actually done something for the healing art after ages of empty-handed bragging, that we may be pardoned if we are rather taken aback. Sudden shocks are dangerous.

THE *British Medical Journal* (May 29th) is not less distressed than the *Hospital* at the bare idea of an Anti-vivisection Hospital; as the *British Medical Journal* is an organ for scientific doctors, it must be expected to take higher ground than its nursing contemporary, and so we find a long list of alleged discoveries connected with medicine and surgery that, to be logical (these vivisectors are so concerned about our logic), we must ignore. What and whom to exclude from the new hospital, is set out for us as follows:—We must not accept the Listerian treatment. Well, we shall not introduce the carbolic spray, which Lister declares he is now ashamed of; nor shall we poison our patients with carbolic acid and mercury. Mr. Lawson Tait has taught us better than that, and Dr. Stoker has exploded all the experimental nonsense about bacteria and microbes, which Lister declared were the cause of suppuration and blood poisoning, but which are now discovered to be the surgeon's best friends.

WE are not to be allowed the use of the stethoscope! If there ever was a beneficent medical discovery with which the torture of animals had nothing to do, surely it was Laennec's introduction of the stethoscope; an

accident by the way. Boyle's experiments on respiration, and those of Hope on the sounds of the valves of the heart, entailed cruelty to animals without doubt, but the knowledge having been acquired by the student, he cannot divest himself even if he would; we shall therefore continue to feel the pulse and diagnose heart disease in the ordinary way. Nitrite of amyl, we are assured, must not be used for the relief of angina pectoris, because experiments on animals had something to do with the introduction of the remedy. But such experiments were works of supererogation, as no one can handle a bottle of nitrite of amyl for a minute or two without having its effects demonstrated on his own face. It dilates the blood vessels. Nothing more could be learned from animals.

A BACTERIOLOGICALLY inclined murderer has been experimenting with diphtheria germs on his stepmother, happily without effect. The lady proved equally impervious to the influence of chemical poison. Dynamite seems to have proved more potent. We cull the account of the trial from the *Echo* of May 28th, for its suggestions of new perils from the resources of science.

[BY DALZIEL'S AGENCY.]

AN ASTONISHING MURDER TRIAL. DYNAMITE AND DISEASE GERMS.

PHILADELPHIA, May 27th.—The trial of the Attorney, Wintersten, for attempting to blow up with dynamite the house and family of another lawyer named Waller, and also with having attempted to poison the Wallers, was continued to-day. Clifton Knorr, who is the son of a judge, and was implicated with Wintersten and confessed, testified in Court to-day that he first tried on his stepmother the effect of articles impregnated with disease germs to see what the result would be before dosing the Waller family. Knorr continued:—

"I went to New York and saw a doctor there, who said he would try to get me the germs, and afterwards received a letter from him saying he had succeeded. I accordingly sent him the money, and a few days later I received by express delivery some diphtheria germs. I showed them to Wintersten and promised to use them. I tried them by sprinkling my stepmother's dresses with the germs, but without effect, whereupon Wintersten suggested poison for the Wallers. I bought some tartrate of antimony, but threw it away, and then obtained some phenacol and nitro-chloride, with which I dosed my stepmother by putting it in her cup of tea without her knowledge; but as this had no effect, I tried dynamite and blew out the front of Waller's house. I preferred dynamite to dagger or pistol, because I really did not wish to kill the family, but just to wound them, so as to show Wintersten that I have done my duty, and to get the money he promised me. Wintersten suggested in view of my failure that I should get some one else, and he offered to pay 500 dollars to any one who would kill Waller. He gave me 25 dollars, and I went to New York and looked, but was unable to find a suitable man."

THE Rev. W. L. Laufman, of Michigan, a minister of the M. E. Church (whatever that Church may be), has carried his zeal for experiments on animals decidedly far—even so far as the pulpit. The *Dog Fancier* for May reprints (p. 3), with not unnatural astonishment, the following report of his sermon:—

"A recent press dispatch in the *Detroit Tribune* says: 'In the entire history of Michigan no pastor has dared to so graphically illustrate a sermon as did Rev. W. L. Laufman, of Cadillac, yesterday, who has a reputation as a somewhat sensational minister. He preached upon the deadly effects of narcotics, and, to prove his assertions, killed two cats in the pulpit with nicotine. The church was packed with an expectant audience, announcement having been made the previous Sunday that two felines would be killed in the pulpit in this way.'"

OUR excellent contemporary *To-Day* published on May 29th the following answers to correspondents. We acknowledge with gratitude the kindly help often received from the Editor.

H. P.—I thank you for your sympathetic letter. Slowly the public are being educated on this subject of vivisection, and in that direction the remedy lies.

C. C. D.—Your letter gave me great pleasure. If animals had votes we should very soon hear the last of vivisection. To my thinking, the theory put forth by the scientists that man is the god of the brute creation is blasphemous. That we have rights over animals goes without saying. We have the right to use them, but not to abuse them, just as they have the right to use each other—the tiger to feed upon the antelope, the hawk upon the sparrow. But beyond these rights, clearly defined by instinct, our control does not extend. If the Day of Judgment be not a myth, there will be called into that court a terrible witness against man: it will be dumb-brutedom, with its ghastly burden of needless suffering.

DR. WM. J. ROBINSON has contributed an article to the *New York Medical Journal* entitled "The Anti-Vivisectionists Insane," in which he eulogizes the vivisectionists in the following terms:—

"Do Mr. Mollering and the know-nothings of his ilk [by which he meant the anti-vivisectionists] understand what sort of men the vivisectionists are? I will tell them. They are men of giant minds and great hearts; men but for whom the earth would be a barren desert intellectually; men but for whose occasional appearance among us, life would be so dull and insipid as not to be worth living; men who make science advance with giant strides; men whose glorious names will remain in the annals of history for ever and ever; men who are making us all wiser and healthier, kinder and happier."

Dr. Robinson, we should say, is a man of a highly poetical imagination. It would never have occurred to our own dull intellect to describe Prof. Mantegazza, the dog crucifier, as a Mr. Great-heart, nor Dr. Brachet, who deprived the dog who loved him of his senses one by one to test his affection, as a man calculated to make us kinder and happier. Neither could we bring ourselves to consider Magendie or Dr. Castex as men of glorious minds and giant brains, "without whom earth would be a barren desert intellectually." Scientifically we should describe these men as belonging to the Natural Order "Angels," of the genus "fallen," species "fiend."

THE return of the Pasteur Institute for the three months ending December 31st, shows that the total number of persons under treatment was 307, of whom 276 were French and 31 foreigners. Of this total, 35 had been bitten by animals "experimentally proved to be mad, 185 by animals declared by veterinary certificate to be so, and 87 by animals only suspected of madness." The bites were inflicted in 268 cases by dogs, in 38 by cats, and in one by a cow.

THE *Medical Week*, June 11th, reports some experiments of Dr. Arloing in poisoning animals with human sweat, collected after severe muscular labour. The experimenter says, "For some reason of which we know nothing as yet, certain dogs and rabbits resist a dose which is fatal to other animals of the same species." What possible good to medicine can accrue from such research as this?

DR. NELTER reported to the Biological Society of Paris, on May 29th, 1897, that he had succeeded in killing guinea-pigs, rabbits and mice by mixing dust from the air of hospital wards with sterilized water, and injecting the stuff into the bellies of the animals. He

had twice caused violent inflammation of the bowels with double pleurisy in young guinea-pigs by this process. As nobody ever believed the air of a hospital ward to be as pure as that of the summit of the Rigi, little or nothing could be learned from such cruel experiments. Sir Andrew Clark produced all sorts of inflammations by injecting dust of any kind into such delicate structures.

THE *Theosophic Gleaner* (Bombay), for May, draws attention to the fact that the inoculations against the bubonic plague in Bombay and other parts of India began after the force of the pestilence showed signs of diminution, and the inoculations were tried among the class the least affected by the malady. Our contemporary says, "It is encouraging to find that the Indian Government, both at home and abroad, is exercising a wise reticence, and is not promoting or adopting the inoculation officially."

THE *British Medical Journal* next forbids us to localize brain disease or remove cerebral tumours, because all that knowledge has come to us from the researches of Ferrier and Horsley. This is as impertinent as it is false. We shall avail ourselves of all the knowledge of brain surgery given us by surgeons from Hippocrates to Hughlings-Jacksons, and Charcot, whose researches were made at the bed-side and *post mortem* table, and had no reference to experiments on animals.

WE are to rigidly exclude the use of anti-toxins for diphtheria, etc. This we can readily promise to do, as we can do better without than with these exploded nostrums. By the time our Anti-vivisection Hospitals are ready to receive patients, the serum business will be played out, and to employ the anti-toxins would be an anachronism.

FROM the *Thier-und Menschenfreund* we learn that in accordance with the resolution passed at the Buda-Pesth Congress, Professor Szalkay, who was then elected Secretary until 1900, has informed the Paris S.P.C.A. that the question of vivisection should again be discussed at the International Congress to be held at Paris in 1900. In answer, the President of the Paris Society has written very politely objecting to this, saying, at the same time, that he is much pleased by the acceptance of his Society's invitation, and promising the delegates a most hospitable reception. Upon this the *Thier-und Menschenfreund* makes the following remarks:—

(a) Although it was resolved at the last Congress that vivisection should be discussed at the Congress of 1900, it is out of the question to compel the Paris Society to agree to this.

(b) But the Congress might be divided into sections, each discussing its own particular subject, and submitting its conclusions, for acceptance, to the Congress as a whole. This plan has worked well elsewhere, and is highly recommended, but it has not yet been considered in connection with the Paris Congress.

(c) The various societies which have joined the Anti-vivisection movement might accept the invitation of the Paris Society, and side by side with the general congress form a special congress to consider the question of vivisection, members of the other societies being of course free to take part in it. This would afford an excellent opportunity for the institution and organization of the already proposed "World-Union against Vivisection."

The great desire of the *Thier-und Menschenfreund* is to avert disunion as far as possible.

HORSES, said Linnæus, eat aconite leaves with im-

punity. This fact has been disputed, but the following account from the *Chemist and Druggist* of May 15th, seems to prove that the elephant is not susceptible to the action of the deadly drug aconitine:—

"A large elephant escaped from Cross's Menagerie at Liverpool a few days ago, and was kept chained in an out-house on the farm on which it was captured, at Netherton, and in charge of three keepers. Mr. Cross, thinking it not advisable to try to bring it back, for fear it might do more damage, ordered it to be killed. He was afraid to risk shooting it, lest, if the first shot did not take effect, the animal might go mad or break away. So he resolved to try poison. He got Mr. J. Hocken, chemist, Old Hall Street, and his son to accompany him, and taking a large bottle of prussic acid and a package of aconitine, a quantity of buns, apples, and carrots, the party set out. The carrots, which were given to the elephant, it ate with relish. One with the inside scraped out, and the top left for a plug, was then filled with aconitine, and passed to the beast, who swallowed it in an instant. 'There,' said Mr. Hocken, 'he has swallowed enough poison to settle 2,000 people.' It had no effect, however, on the elephant, which went on eating as before."

WE take the following from the *British Medical Journal* of May 22nd:—

"THE DURATION OF INFECTION IN WHOOPING-COUGH.

"Weill, who in 1894 expressed the opinion that whooping-cough is contagious only during the premonitory catarrhal stage, has since put his opinion to the test (*Lyon Med.*, May 9th, 1897). On various occasions he permitted nearly a hundred young children, who had not previously suffered from whooping-cough, to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient from whom the infection was derived was in the very earliest period of the whooping stage."

As whooping-cough is a disease which is frequently fatal and always debilitating, it was a cruel and unjustifiable proceeding of the doctor to try such an experiment on helpless children who were patients in a hospital not as "clinical material," but to receive treatment appropriate to their complaints.

THE following extract from the *Homœopathic World*, June 1st, p. 271, seems to prove that the corpses of consumptive persons are useful to the bacteriologist in preparing his cultures.

"Dr. Compton Burnett, in his book *New Cure for Consumption*, p. 129, makes this remark, 'The best way to get some really good *Bacillinum* is to take a portion of the lung of an individual who has died of genuine bacillary tuberculosis pulmonum, choosing a good-sized portion from the parietes of the cavity and its circumjacent tissue, as herein will be found everything pertaining to the tuberculous process—bacilli, debris, ptomaines and tubercles in all its stages (such was practically the origin of the matrix of my *Bacillinum*)—and preparing by trituration in spirit. In this way nothing is lost."

We hope that if *Bacillinum* of the "really good" variety ever finds its way into medicine it will be used in homœopathic doses. We wouldn't like to take more than the ten-billionth of a grain of the stuff for a dose.

OUR friends will be glad to learn that a much more sympathetic feeling towards our cause has of late been manifested by the Roman Catholic press. Cardinal Vaughan also in his Jubilee Pastoral Letter said, amongst other causes for rejoicing during Her Majesty's reign was "a thoughtful care even for dumb animals, faithful servants of man—clearly matter for gratitude and thanks-

giving to Him who, in a true sense, is the Inspirer and the Finisher of all good works." For many weeks past several columns of the *Catholic Times*, the best and most liberal of all the Roman Catholic papers, have been filled with letters denouncing Father Rickaby's teaching that animals are mere things in our regard and have no rights. A number of admirable letters from our friends and supporters have been published, and the opposition manifested has been singularly feeble and ill-sustained.

THE HON. STEPHEN COLERIDGE AND THE PRINCE OF WALES.

20, VICTORIA STREET, LONDON, S.W.

May 27th, 1897.

TO HIS ROYAL HIGHNESS THE PRINCE OF WALES.

SIR,—In the name of this Society it is my duty to convey to your Royal Highness its deep sense of obligation for the gracious words that fell from you at Guy's Hospital yesterday, inculcating mercy towards the animals vivisected there.

But, Sir, inasmuch as your Royal Highness has been assured that heretofore in that place "the only operations performed upon animals which are not in a condition of complete anæsthesia are inoculations and hypodermic injections," it becomes our immediate duty to show your Royal Highness from the publications of the Government and of the vivisectors themselves that these assurances are altogether inaccurate.

For purposes of brevity I will only deal with one of the six persons licensed to vivisect without anæsthetics at Guy's, viz. Mr. Ernest H. Starling, M.B., B.S.

This vivisector took out an additional certificate dispensing with the obligation to kill the animal before its recovery from anæsthesia, and the last parliamentary return states that of his 127 vivisections 115 were painless, the remaining twelve therefore by implication were painful, and they are described under the term "aseptic wounds."

This is all that can be gleaned from a parliamentary return prepared by an inspector who supports the practice of vivisection, and who compiles his statistics from what the vivisectors themselves choose to reveal to him of their own doings each year.

But in the *Journal of Physiology*, vol. xix., which deals with the period under review in this parliamentary report, on pages 15, 16, and 17, Mr. Starling publishes for the edification of brother vivisectors what he has been doing in the Physiological Laboratory at Guy's Hospital.

The dissection of live dogs is there described, the word anæsthetics is never so much as mentioned; and the following remarks with which he summarises his experiments will sufficiently show their awful nature:—

"I have thought that possibly the common feature of my earlier kidney experiments and the experiments of Mr. Gley might consist in a certain degree of shock, due to exposure of intestines, or injury of splanchnics.

"Several experiments which I have made, however, lend no support to this view—exposure of all the intestines for an hour, ligature of the intestines in several places, with division of the splanchnic nerves, crushing the suprarenals—all these procedures had no influence on the effects of a subsequent peptone injection, etc., etc."

Now my Society respectfully asserts that these tortures cannot be reconciled with the assurances tendered to your Royal Highness.

Something, perhaps, is gained in the cause of mercy when the vivisectors are constrained to make professions to your Royal Highness of a humanity which they leave behind them at the door of the laboratory.

Certainly we may recognize in these professions a very genuine tribute to the well-known benevolence of your Royal Highness, but it is none the less our duty to show that they are vain, and that as in the past so in the future the torture of animals relentlessly will be continued in the Laboratories at Guy's Hospital.

I beg leave to subscribe myself,

Your Royal Highness's obedient humble servant,

(Signed) STEPHEN COLERIDGE, Hon. Sec.

[COPY.]

MARLBOROUGH HOUSE,

June 2nd, 1897.

DEAR SIR,—I am desired by the Prince of Wales to acknowledge the receipt of your letter of the 27th May, and to thank you for the kind words in which you express yourself towards him.

In consequence of your statement His Royal Highness at once directed further inquiries to be made at Guy's Hospital concerning the charges which your Society has brought against it.

He referred the matter to Dr. Starling and Mr. Fripp. He places great confidence in both these gentlemen, and feels confident they are incapable of suppressing the truth.

Their reports have now reached him, and, after reading them, he can come to no other conclusion than that you are labouring under a misapprehension in regard to the practice which is observed at Guy's.—I remain, yours truly,

FRANCIS KNOLLYS.

The Hon. Stephen Coleridge.

[COPY.]

THE VICTORIA STREET AND INTERNATIONAL ANTI-VIVISECTION SOCIETY,

20, VICTORIA STREET, LONDON, S.W.,

June 4th, 1897.

DEAR SIR,—I have your letter of the 2nd June, informing me that His Royal Highness the Prince of Wales places great confidence in Mr. Starling and thinks him incapable of suppressing the truth.

My Society, accepting on His Royal Highness's authority this view of Mr. Starling's candour, places implicit faith in Mr. Starling's own account of the tortures he has inflicted on animals at Guy's Hospital, as described by himself on pages 15, 16 and 17 of the nineteenth volume of the *Journal of Physiology*, which I have already quoted.

My Society, on the same high authority, accepts Mr. Starling's acknowledgment in the last Parliament report, that twelve of his operations on animals at Guy's were "not painless."

But the Society begs leave respectfully to point out that no private report which Mr. Starling may now think fit to present to His Royal Highness can be accepted by it or the public as availing to outweigh his own published account of his doings, or his official acknowledgments to the Government Inspector.—I remain, dear sir, very faithfully yours,

STEPHEN COLERIDGE.

Sir Francis Knollys, K.C.M.G.

OUR CAUSE IN THE PRESS.

The following letter was published in the *Pall Mall Gazette*, June 3rd:—

"A GOOD DOG WITH A BAD NAME.

"TO THE EDITOR OF THE 'PALL MALL GAZETTE.'

"SIR,—The man—wasn't he called Llewellyn?—who, by a sad mistake, slew the faithful hound who had just saved his child's life, was not halt so unfortunate as the bacteriologists who have been killing all the staphylococci they could catch with carbolic acid and mercury and other deadly antiseptics, when all the time these blessed bacteria, as you tell us to-night, are the surgeon's best friends. 'Dr. Stoker is convinced from his observations of the course of the oxygen treatment that their action is favourable to healing'; and we have been destroying them with disinfectants since Lister first taught us to hate them! The staphylococci are a fairly large family, and some of them like *Staphylococcus pyogenes aureus* are credited with causing septicæmia and death, yet Dr. Stoker has rehabilitated the family, as historians are whitewashing all the bad characters of our schooldays. You say that some folk 'abhor bacteriology.' I don't know we do that, but I for one hold it in little esteem in relation to medicine, and your article on the oxygen cure is rather hard to reconcile with Listerism, is it not?—I am, Sir, yours, etc.,

"EDWARD BERDOE, M.R.C.S., etc.

"Tynemouth House,

"Victoria Park Gate, May 31st."

VIVISECTION AND ITS CRUELITIES.

TO THE EDITOR OF THE "LIVERPOOL COURIER."

SIR,—Anonymous attacks in newspaper letters are usually made by people ashamed of their names, arguments, or motives, or else all three. The habit I notice is growing apace in the Liverpool press, and takes a wide range, from disgraceful and venomous attacks upon a venerable and venerated bishop, down to mean and paltry assaults upon those who are doing their best to lessen the sum of misery and cruelty in the world.

Mr. W. H. Priest wrote a good letter in the *Courier* a few days since on the infernal cruelties inflicted on helpless animals by vivisection. An anonymous letter instantly follows calling in question statements made by Mr. Priest, the writer being so blushingly modest that he finds himself unable to face his own name in print, and therefore attaches the initials "F.D." to the tail of his nasty little letter. Mr. Priest being away from home will not probably see Liverpool papers for some weeks to come. Judgment, however, must not be allowed to go by default in his absence. "F.D." professes anxiety to be enlightened as to the cruelties alleged by Mr. Priest, and challenges him to give names and evidence of his statements. This is a large order that I would gladly take on Mr. Priest's behalf if you, sir, would kindly place every column of your paper at my service for a week, and then like *Oliver Twist* I should want more.

If "F.D." really wants this information, which I doubt from the tone of his letter, let him write to or come and see me, and I undertake to satisfy him even if he has a Gargantuan appetite for horrors. If he does this I will let your readers know; if he does not, I will also let them know; so that "F.D.'s" motives may be clearly seen. Meantime, here are a few references to tortures, some of which Mr. Priest mentions, and about which "F.D." says with truth these charges are of a most serious nature, and any man inflicting such torture would be worthy of severe punishment. Quite right, F.D.

1. The Royal Humane Society's Report, 1865, records 76 experiments, mostly on dogs, by a Committee of which Dr. Burdon Sanderson was one. Plugging windpipes to suffocate, withdrawing plugs, and then repeating over again. Holding under water, drowning, and recovering to repeat over and over again. Immersing heads in liquid plaster-of-Paris and mercury. On examination, lungs found full of white plaster, or in case of a guinea-pig "globules of mercury drawn up by this animal an inch or two in spite of gravitation." In the name of God what object had these experiments? If Dr. Burdon Sanderson should ever propose to commit suicide, will he mix himself a tub of plaster-of-Paris, or order in a bucket-full of mercury to stick his head in?

2. Dr. Lauder Brunton records a series of experiments on rabbits and cats by baking.—*Practitioner*, vol. xxxiii.

3. Claude Bernard, the famous French vivisector, who sacrificed countless thousands of animals, and at the close of a long life spent in torturing helpless creatures could only say when asked about results, "Our hands are empty, but our mouths are full of promises." Bernard gives full and minute details of baking dogs, pigeons, rabbits, together with pictures of stoves with fire under, and animals in the ovens for baking like a cake or pie. Surely the Devil's own cookery book.

4. *The Journal of Physiology*, vol. ii. (published by Clay at the University Press, Cambridge), gives an elaborate description of a series of infamous bakings of dogs by Dr. Christian Sibley. Dogs tied to a "dog-board" with arteries cut; put into a box with iron bottom heated by gas jets beneath the iron; hot water poured into wounds. Spinal cords cut. "No opiate" in some cases, and so on *ad nauseam*.

5. Horrible scalding and burning experiments in "*Virchow's Archives*," vol. lxxix, 1880. Spinal cords cut through, then scalded. Some dogs lived six to ten days after.

6. Dr. Carpenter in his "*Physiology*" mentions pouring boiling water into stomach.

7. *Edinburgh Medical Journal*, 1868-9, records experiments sponging chests and bellies of dogs with oil of turpentine five or ten times in quick succession, setting fire to it each time. Scalding water poured over similar parts many times in quick succession.

8. Here is a sweet and lovely experiment from *British Medical Journal*, 1891—two apostles of this kind of "light and leading" (sulphurous in its origin and ending, we maintain).

Drs. Shattock and Ballance fed rats with cancer of the breast (somebody's breasts that is!) during a course of experiments lasting over seven months. Here is another, equally revolting to sense and sensibility. Dr. Klein—lecturer at St. Thomas's Hospital, London—fed five fowls with human tubercular matter. One entire human lung (full of tubercular matter) was eaten by them. A fortnight later another human lung full of tubercle was eaten. I should like to know what the friends of the poor creatures who provided these delectable meals for fowls would have said to Dr. Klein who—on his own showing before the Royal Commission in 1875—was one of the most callous persons who ever trod the earth, had they known the kind of burial the lungs of their poor friends were receiving. Are these sufficient for F. D.? If not, here are one or two more to close.

9. *The Journal of Physiology*, vol. xxi. (1897), gives some atrocious experiments on dogs and cats under morphia, which is a stupefier only, and not an anæsthetic (pain killer) at all.

10. In the same journal "F.D." will find in vol. xviii. is recorded a history, in the words of vivisectors, of a series of terrible experiments on dogs whose throats were cut, whose blood vessels and hearts penetrated by tubes, skulls bored through, chests torn open, hearts wrapped in wadding, nerves cut and stimulated by electricity. All these horrid mutilations were performed under Curare, and took place in University College, Gower-street, London, last year. Curare is the "hellish woorali" of Lord Tennyson. "Hellish" because it renders a vivisected animal motionless as a corpse, but leaves its sensibility to pain intact. The animal feels even more acutely than otherwise because it has no power to express its agony by moan, cry or struggle. This is the drug that protects the vivisector's hands from his tortured victim's bit's and scratches, and the neighbourhood of his laboratory from the screams of anguished animals.

11. The *Lancet* of May 22 records the pretty fact that "the successful inoculation of cancerous tissue in animals has been accomplished (what on earth for?), and experimental grafting in man has also succeeded." I wonder who the "man" was, and whether he knew what a pleasant experiment it was that "succeeded" in his "vile body."

12. The *Lancet* of May 8, in "Library Table," mentions records of "varnishing" rabbits, and the causes of death (not a matter of difficulty, I opine). Also freezing of animals to show that "the lower the temperature to which an animal is exposed the quicker does its temperature fall." I should have thought any dunce knew that.

I could go on *ad lib*. Forgive me for this long letter, but the subject is of such public importance. Away with the monstrous hypocrisy that would try to make us believe that these frightful torments inflicted upon millions of dumb animals are all on behalf of "suffering humanity." Listen to what Victor Horsley, an arch-vivisector (to whom, by the way, we are indebted for the present muzzling order), tells us—babbling in his sleep, perchance, and so the truth slipped out—"After the furtherance of science, the benefit of humanity is the object we have in view." Yes, Professor Horsley—evidently—a long way after!—Yours, etc.,

THEODORE A. HOWARD.

St. Matthew's Vicarage, Prince's Park,
June 9th, 1897.

"ALL crime must be expiated, and slavery is the repetition among men of the sufferings brutally imposed by man upon other living beings; it is the theory bearing its fruits. The right of man over the animal seems to me to cease with the need of defence and of subsistence. So that all unnecessary murder and torture are cowardice, and even crime. The animal renders a service of utility; man in return owes it a meed of protection and of kindness. In a word, the animal has claims on man, and the man has duties to the animal. Buddhism, no doubt, exaggerates this truth, but the Westerns leave it out of count altogether. A day will come, however, when our standard will be higher, our humanity more exacting, than it is to-day. *Homo homini lupus*, said Hobbes: the time will come when man will be humane over the wolf—*homo lupus homo*."—From *Amiel's Journal* (Oct. 6, 1866).

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, THURSDAY, JULY 1st, 1897.

THE INSPECTOR'S REPORT AND VIVISECTORS' RETURNS FOR 1896.

At last, Dr. POORE, the Inspector under the Act relating to vivisection, has so far broken away from the traditions of his office—and of University College, where he is a member of the teaching staff—as to desert “the Old Story” on which we commented a year ago, and make a new departure. Hitherto, the public have been annually informed that “Experiments under Certificate A”—dispensing the vivisector from all use of anæsthetics whatever—“are practically always of the nature of hypodermic injections or inoculations;” but this year the whole of this class of experiments is separated, and according to the Inspector's Report and the Vivisectors' Returns, it is made to appear that not a single major experiment, as it may be termed, involving surgical measures, has been performed under Certificate A. Such a statement involves so great a draft upon our credulity that we entirely decline to accept it, especially as we have seen, in the *Journal of Physiology* and other scientific records, reports from vivisectors themselves of most severe surgical experiments, in which no mention of the use of anæsthetics has been made.

We noticed that a special point was this year made in the comment and abstract of the Report sent round to the press that tabular evidence is afforded establishing these points:—

- “(1) That licenses and certificates have been granted and allowed only upon the recommendation of persons of high scientific standing.
- “(2) That the licensees are persons who, by their training and education, are fitted to undertake experimental work and profit by it.
- “(3) That all experimental work has been conducted in suitable places.”

These “points,” which are quoted verbatim from the Report, seem on the face of them to be quite reassuring. The Inspector possibly holds this view of them, since he

has repeated them year after year. The Press, skimming the Report superficially, has taken the same view, and is often inclined to ask, “What more can the anti-vivisectionists want?” The *Morning Post*, for instance, this year “hoped all ardent anti-vivisectionists would take an opportunity of reading the Report on experiments performed on living animals, just issued as a parliamentary paper,” as if that ought to be sufficient to convince us all what mistaken people we are. This being so, it is well worth while to look into these “points” a little more closely.

As to the first—the recommendations on which the licenses and certificates have been granted—we may point out that many of these recommendations are given by vivisectors to other would-be vivisectors; so that in this very important sense, as well as in some others, the Act of Parliament is put in operation by those who are inimical to the interests of the animals and all in favour of what they are pleased to regard as the advancement of science, a claim we are far from admitting. Some of those who give these recommendations are the following promoters and past or present practisers of vivisection:—

Professor of Physiology, University of Cambridge
(Dr. MICHAEL FOSTER).

Professor of Physiology, University College,
London (Dr. SCHÄFER).

Professor of the Institutes of Medicine, University
of Edinburgh (Dr. RUTHERFORD).

Professor of Physiology, University of Aberdeen
(Dr. McWILLIAM).

Holt Professor of Physiology, University College,
Liverpool (Dr. SHERRINGTON).

Professor of Physiology, University of Oxford
(Dr. GOTCH).

Regius Professor of Medicine, University of Oxford
(Dr. BURDON SANDERSON).

Professor of Medicine, Owens College, Manchester
(Dr. DRESCHFELD).

There are still more who might be added, but these will be sufficient to show the worthlessness of the first “point” made by the Inspector and the Press.

Then, as to the second of these “points,” that the licensed persons are fitted by training and education to undertake experimental work, and to profit by it, we observe that at Cambridge, no fewer than seven men amongst those who actually experimented are denoted as possessing no apparent connection with medicine or the medical profession at all, and that while three had reached the development of Masters of Arts, no fewer than four were mere Bachelors. In studying these returns in former years we have suspected—from the fact of names appearing once, and then disappearing—that young men are armed with a license and one or more of the certificates with the view of testing whether

they are of the stuff of which vivisectors are made, and that if they show an absence of the necessary "nerve," a lack of callousness that is, they are passed on to follow some other pursuit. At any rate, the fact remains, that men are introduced into the laboratories who are not "by their training and education fitted to undertake experimental work, and to profit by it."

Again, as to the third "point," in regard to suitable places. The Inspector cannot possibly certify to this as a fact in all cases. For instance, from a note on page 20 of the return, we learn that Mr. G. T. BROWN, M.R.C.V.S., licensed and certificated at the Royal Veterinary College, "may also perform experiments under the certificate dispensing with the use of anæsthetics at such places as may be necessary," provided that he afterwards reports the names of such places to the Inspector. This is clear evidence of the Inspector knowing nothing of what is happening till after the event. The vivisector selects the necessary place, uses it, and tells the Inspector it was a proper place. Would he be likely to make any other report, whatever place it was? Another and even worse instance of the unjustifiability of the Inspector's statement as to suitable places, is furnished by the case of Mr. VICTOR HORSLEY. His name is down as operating, armed with a license and four certificates, at the Brown Institution, Wandsworth Road, but in a note it is stated that he "can also perform experiments at the Medical and Scientific Departments, University College, London, and at such places as may be necessary." How can the Inspector, therefore, certify to the fitness of Mr. HORSLEY's places, he having practically a roving commission to experiment where he likes? Such an amount of freedom to any vivisector abolishes control and frustrates the object of the Act.

There is another most important feature in the Inspector's Report under notice. Its author has endeavoured more than ever to make it a brief for the vivisectors. He goes into the question of "the rapidly increasing knowledge of diseases caused by inoculable organisms," and says "inoculation is largely used for the diagnosis of disease in man and animals." This, we may remark *en passant*, is a revelation; it is a distinct admission that mankind are experimented on, a fact sometimes by our opponents so strenuously denied. But the Inspector goes further in advocacy of the vivisectors' pleas. He enumerates a long series of diseases in regard to which he states that knowledge "has been increased by inoculation experiments." In thus descending to particulars, he trenches on what is for himself and his clients dangerous ground. On that ground he can and shall be met. The subject is, however, very wide in its scope, and will need a separate article, and this it shall very soon have devoted to it in the pages of the *Zoophilist*. Before we leave the subject we cannot but remark on what is so obvious, namely, the futility of employing a man to enforce a restrictive law who openly and in his official capacity acts as the advocate of those whom he is set to oversee.

"The licensees as usual have been loyal to the spirit of the Act," says the Report; but the Inspector should have added, "so far as I know." He only knows what the vivisectors tell him, and of course if they do not actually hoodwink him—which may not be impossible—they do not give even a friendly Inspector the chance of levying heavy penalties upon them. The vivisectors are largely, almost entirely, their own inspectors, and of course they do not paint themselves in their worst colours when the time comes to confess to Dr. POORE. But although this is no doubt the case, the Inspector makes it out that while the licensees have—with the perfunctory "as usual"—been loyal to the spirit of the Act, there have been two who have failed to comply with its letter. The cases are set out, and are so extremely frivolous and minute that we suspect Dr. POORE of trifling with Parliament and the public. Well might the writer in the *Morning Post*, already referred to, remark that "the breaches of the law are scarcely perceptible to the ordinary understanding."

There are much more important breaches of the law which escape the Inspector's notice, because while he says Certificate A, dispensing with the use of anæsthetics, is granted only for inoculations, there are authentic records to show that severe surgical experiments are carried out on the fully conscious and sentient animal. The kind of Report which Parliament has this year been favoured with is designed as an anæsthetic to public opinion of a bolder and more audacious sort than has probably ever been issued before, but to those who have studied these Reports from year to year, as we have, it is apparent that the Inspector flounders deeper and deeper into the morass of insincerity as he strives his hardest to screen his clients, the vivisectors, from the public odium and condemnation they so richly deserve.

For purposes of comparison and reference we tabulate here the statistics of the returns for the last ten years:—

LICENCES AND CERTIFICATES. — ENGLAND AND SCOTLAND.

Year referred to.	Persons Licensed.	No. of Licensees wh. Experimented.	Certificates Granted and Used.					
			A ¹	B ²	C ³	D ⁴	E or E.E ⁵	F ⁶
1887 ...	82	64	41	22	22	1	17	
1888 ...	75	55	38	21	19	—	15	
1889 ...	87	66	43	34	15	—	18	4
1890 ...	110	77	60	46	14	—	24	3
1891 ...	152	109	84	48	25	1	26	3
1892 ...	180	125	92	75	24	1	39	4
1893 ...	184	135	120	102	32	2	59	3
1894 ...	185	129	122	108	32	1	67	6
1895 ...	213	148	124	107	42	1	77	8
1896 ...	236	166	150	116	40	1	88	16

EXPERIMENTS MADE.

Year referred to.	Under Licences alone.	Under Certificates.						Total.	No. of Admittedly Painful Experiments.
		A ¹	B ²	C ³	D ⁴	E ⁵ or E.E.	F ⁶		
1887 ...	357	582	162	46	—	—	73	1220	71
1888 ...	239	498	195	82	—	25	30	1069	8
1889 ...	428	644	170	75	—	18	19	1417	88 ⁷
1890 ...	872	796	255	57	—	112	10	2102	316
1891 ...	875	1363	210	111	—	94	8	2661	No return
1892 ..	1046	2239	303	125	—	224	18	3960	No return
1893 ...	1061	2183	317	140	—	341	14	4046	No return
1894 ...	942	1507	340	128	—	173	—	3104	No return
1895 ...	1333	2317	603	227	—	190	9	4676	No return
1896 ...	969	5217	875	184	—	242	13	7500	No return

¹ Special for experiments without anæsthetics.

² Dispensing with the obligation to kill the animal before recovering from anæsthesia.

³ Certificates permitting experiments in illustration of lectures (use of anæsthetics obligatory).

⁴ For the further advancement of knowledge by testing previous discoveries.

⁵ Permitting experiments on cats or dogs, without anæsthetics. Linked with A or B.

⁶ Permitting experiments on horses, mules, or asses. Linked with A or B.

* The report of these cases is accompanied with a notification that the pain inflicted was in some slight only.

The following is a list of the towns, as given in the Returns, where laboratories were registered in the year 1893, with the number of vivisectors actually at work:—

ENGLAND AND SCOTLAND.

Licensed Places.	Vivisectors at Work.	Increase.
Aberdeen	6 ...	—
Cambridge	17 ...	4
Cardiff	1 ...	—
Dundee	1 ...	—
Edinburgh	14 ...	—
Glasgow	8 ...	—
Leicester	2 ...	1
Liverpool	7 ...	—
London—		
University College ...	20 ...	2
King's College	5 ...	—
St. Bartholomew's ...	11 ...	—
Guy's Hospital	8 ...	1
St. Mary's Hospital ...	3 ...	—
St. Thomas's Hospital ...	4 ...	—
Charing Cross Hospital	2 ...	1
Veterinary College ...	6 ...	1
Institute of Preventive Medicine, 101, Great Russell Street ...	2 ...	1
Brown Institution ...	8 ...	—

Licensed Places.

Vivisectors at Work.

Increase.

London Hospital Medical College	1 ...	—
Laboratory of Royal Colleges of Physicians and Surgeons	22—92	—
Manchester, Owen's College	5	—
Netley... ..	1	—
Newcastle-on-Tyne	4	3
Oxford... ..	7	5
	165	

IRELAND.

There is a longer Report from Ireland than usual, by Sir W. THORNLEY STOKER, the Inspector, and there is admitted to be an increase of vivisection in the sister island. The number of experiments performed is reported to be 97, done by five vivisectors, three at Dublin and two at Belfast. Pain, described as "slight," is admitted to have been inflicted in fifteen cases.

THE ANTI-TOXIN REPORT, 1896.

THE REPORT ON THE USE OF THE ANTI-TOXIC SERUM in the 'Treatment of Diphtheria in the Hospitals of the Metropolitan Asylums' Board during the year 1896 has just appeared. The physicians say, "We have only to add that we still hold to the opinion that in the anti-toxic serum we possess a remedy of distinctly—we would now say much—greater value in the treatment of diphtheria than any other with which we are acquainted." Some curious facts, are, however, allowed to leak out in this otherwise *couleur de rose* Report. Thus we learn that "a considerable increase of complications was noticed, especially of albuminuria and paralysis, but the medical superintendents seem to attach but little importance to it. Probably the unfortunate patients took a much less optimistic view of their case, that is to say, such of them as lived to take any view at all.

The doctors, no doubt, so far as their statistics were concerned, were satisfied if their patients did not die of diphtheria, but only succumbed to Bright's disease and paralysis, and so avoided discredit to the anti-toxin. A still more remarkable statement is the observation that the Report is signed by all the medical superintendents except one, who finds himself unable to subscribe to all the conclusions expressed. During the greater part of the year, however, he was suffering from the effects of an attack of diphtheria. It is evident that either this gentleman did not himself submit to the serum treatment, or if he did, could not speak favourably of it.

This gentleman is Dr. Wm. Gayton, one of the oldest and most eminent of the Board's medical superintendents, who, in 1895, expressed himself in favour of the serum treatment. As he is the head of the North-Western Hospital, and fully realizes, as he assures us, his responsibility in the matter, his abstention is the more remarkable.

REPORTS OF MEETINGS.

THE SOCIETY FOR UNITED PRAYER FOR
PREVENTION OF CRUELTY TO ANIMALS,
ESPECIALLY VIVISECTION.

This Society held its sixth annual meeting at Kensington Town Hall, May 25th. The Rev. A. S. Hewlett, Rector of St. John's, Horsleydown, took the chair. The meeting was opened with prayer, and after the ordinary business of electing officers for the ensuing year, the Chairman read a very thoughtful paper on the ethical aspect of the humanitarian question, showing how great a sin cruelty is against the divine law, and dwelt especially on the duty of consistency, saying that we ought to sacrifice life itself rather than knowingly profit by any remedy alleged to have been discovered through cruel experiments on the lower creatures. The Rev. G. H. Manbey, Headmaster of Albemarle College, Beckenham, followed, and dwelt principally on the necessity for work among the young. He said, speaking as a schoolmaster, he felt very strongly on this subject, and believed there was no greater mistake than to suppose boys are naturally cruel. He found his own boys most tender-hearted, always eager to tend the little birds which fell from their nests and the like, and he was confident there was not one boy in his school who would do a cruel, cowardly, or mean action. The reverend speaker seemed all unconscious how much his own example and teaching must have told on a school of which so ideal a description could be given.

The Rev. L. S. Lewis spoke on the Hospital question, showing how vivisection naturally and logically leads to experiments on helpless patients.

Miss Fergusson Abbott followed with a most interesting speech, in which she detailed her own experiences as a hospital nurse, showing how the habit of inflicting torture on animals brutalized the doctors, and through them reacted injuriously on the moral tone of the nurses.

Mr. R. Nevin showed how the poets in all ages have espoused the cause of the animals, and suggested the compilation of a volume of passages from the poets on this subject.

Mr. R. S. Wood said it gave him special pleasure to attend a meeting of this Society, because he felt, in addition to its animal protection labours, it was doing a valuable work for the reunion of Christendom by joining in one common bond of prayer members of the Anglican and Roman Churches, and of all other bodies of Christians who unite in the worship of the Divine Founder of Christianity. At the close of the meeting two resolutions were put, one asking the Home Secretary to refuse any licence to vivisect at the Institute of Preventive Medicine, and the other urging on the Member for South Kensington the need of a Bill being introduced into Parliament for the total abolition of vivisection; both were carried unanimously.

COUNCIL MEETINGS OF THE B.W.T.A.

The annual council meetings of the British Women's Temperance Association were held in Westminster Chapel, London, on the 1st, 2nd, and 3rd of June. The two following resolutions were on the agenda paper for Thursday, and time being short they were conjoined and proposed as one resolution by Miss E. F. Evans, of Beckminster, and seconded by Miss Bleby, of Penarth:—

CRUELTY TO ANIMALS AND VIVISECTION.—Proposed by Westminster Branch, and supported by Miss Gorham.

"That this Council, on the occasion of Her Majesty's Diamond Jubilee, and knowing the Queen's strong aversion to vivisection, most earnestly urges upon the Government to protect all animals, whether wild or tame, from cruelty, either in shows, or in physiological laboratories, or elsewhere, and also urges upon the Home Secretary to refuse any further licences for purpose of experiments upon living animals."

VIVISECTION.—Proposed by Penarth Branch:

"That this Council of the National British Women's Temperance Association, believing that the practice of vivisection is (1) Morally wrong, as opposed to God's

Laws of Mercy; (2) Scientifically wrong, as securing no results which could not be, or have not been, ascertained by other means; and (3) Socially wrong, as an element of danger to patients, especially in hospitals, determines to use every means in its power for the suppression of this practice, and calls upon medical men everywhere, and especially upon young medical students to use their skill and energy in the prevention of disease and the relief of suffering, rather than in this falsely-named 'pursuit of science' which involves so great an amount of unnecessary cruelty and suffering."

The mover of the resolution urged that kindness to animals should be taught as a part of Christian duty, that all animals should be protected from cruelty by killing for food they should be humanely put to death. Referring to vivisection, she said it was a sin against God and the creatures He had made; could not lead to satisfactory results; caused the hardening of the hearts of the medical students, and led on to experiments upon hospital patients. Miss Bleby briefly seconded, when a delegate rose in the body of the chapel and proposed an amendment which, however, proved to be a direct negative. She was briefly seconded by another Welsh delegate; then Miss Gorham, the treasurer of the British Women's Temperance Association, urged on the audience to support the anti-vivisection resolution, and wound up by saying that if great results were to be obtained by means of vivisection, she would rather die than animals should suffer. Mrs. Walter McLaren warmly expressed similar sentiments. Mrs. Pearsall Smith also spoke a word on behalf of the animals, and amidst some enthusiasm the resolution was then put and carried with but few dissentients. There was much interest aroused and many enquiries on various points were afterwards made of the mover of the resolution, and one lady, whose son was to shortly enter a London hospital, expressed her earnest wish that he could go to one where no vivisection was practised. Information on the point was kindly furnished by Mr. Trist, of the Victoria Street Society. Seven hundred and fifty delegates were present representing 100,000 Temperance women.

NORTH LONDON INSTITUTE.

HACKNEY AND CLAPTON NATURAL HISTORY SOCIETY.

On Thursday evening, June 10th, Dr. Berdoe delivered a lecture on "Vivisection" before the above Society. The room was well filled chiefly with students of entomology, many of whom exhibited specimens of insects collected in a recent ramble in the New Forest. The chair was taken by C. Nicholson, Esq., F.E.S., who said that in consequence of the recent illness of Dr. Gerard Smith, Dr. Berdoe had been invited to address the Society on the subject of Vivisection, a matter which was not altogether perhaps germane to the study of Natural History, but was certainly of great interest in the present time. Dr. Berdoe said the question was a greatly controverted one. On one side was the small but highly influential body of medical scientists who insisted that medicine could make no real progress without experiments on animals. On the other side was the great army of philanthropists, including, happily, nearly all the women, whilst between these opposing camps there was the overwhelming majority of persons who know little or nothing at all about the subject. This majority, he regretted to say, included many doctors who were indifferent to the whole question; some afraid to expose their ignorance by joining the vivisectionists' camp, others unwilling to violate *esprit de corps* by taking sides with us. The question was a highly technical one and could only be properly discussed by those who had some scientific training. The opposition to vivisection was based on moral and scientific grounds. Every one, of course, was capable of determining what should be his attitude towards it on the ethical basis. The medical side of the question was a far more difficult matter. The practice was largely on the increase. It appeared from the new Return, which he had just received, that 236 persons were licensed to vivisect in 1896, and that 7,500 experiments were performed in this country. Just now the centre of the battle was about anæsthetics, and he was convinced that the friends

of the animals must learn the truth about the matter, and devote their whole energies to exposing the barefaced falsehoods told about the use of pain-destroying drugs in the laboratories. Although a large number of experiments were permitted under certificate A, that is to say dispensing the holder from using anæsthetics, the Home Office did not permit this certificate to be used except for inoculations and operations which are termed "trivial." No doubt there would be great difficulty in obtaining a license from the Home Office if any one went candidly declaring that he proposed to perform the awful mutilations the lecturer would not attempt to describe, without using anæsthetics. This, however, presents no difficulty to the vivisector. By an ingenious fraud which a thimble-rigger would blush to practise the obstacle is surmounted in the following manner. A whiff of chloroform or ether is given the animal, and a dose of morphia or chloral is administered. These drugs are mere pretences, so as to comply with the letter of the Act, they are not used effectually so as to imperil the animal's life or interfere with the results of the research. Next, curare is given which has the power of paralysing all motion while leaving sensibility intact. The lecturer said curare must have been created by the devil, he could not believe God created it. Lord Tennyson called it "the hellish wooral," and from hell it must have originated. He deeply regretted to say that many men of the highest standing as physiologists did not scruple to avail themselves of the mean device of apologising for and minimising the suffering caused by vivisection. They declared that morphia was an anæsthetic when it is only a stupefier, and they masked the effect of their tortures by giving curare to the animals so that they could neither moan, shriek, bite, scratch, nor otherwise disturb their torturers at their infernal work. The creatures could not even breathe except by artificial respiration, which must always be resorted to when curare is used. It was another element in a fraudulent defence to allege that inoculations were trivial. The consequences of a prick of the hypodermic needle might entail days and weeks of acutest suffering. Some of these inoculations were made in the eye, which soon became an ulcerous mass, causing the greatest pain to the victim of that form of investigation. As to the value of vivisection to the art of medicine, he quoted the words of the experimenter, Schiff, to Dr. Carpenter. The notorious Florentine experimenter said, "he had inoculated 14,000 victims, and had not made one discovery big enough to be explained to anyone but a physiologist. Nor were any of these of the least practical importance." Animals are not constituted like ourselves. The conditions under which the researches are made, the fright which disturbs the bodily functions, the agony which makes the flesh poisonous to those who eat it, the effects of the anæsthetic itself when employed, all tend to neutralise any value such a mode of research might be supposed to possess. Coming to the myths and legends about vivisection the lecturer said—We are told that Harvey discovered the circulation of the blood by its means. Not only did he not so discover it, but he *could not* have done so. It could not even be demonstrated in a living animal now, but could easily be proved on a dead one with an injection syringe. Harvey's discovery was a process of reasoning on the position of the valves of the veins, and was learned on the dead body. They tell us that Simpson discovered the uses of chloroform by experimenting on rabbits. This is untrue. He experimented on himself and thus learned the properties of the drug. Again, they say that Lister discovered the antiseptic system of surgery by experiments on animals. But that system is nothing more than transcendental cleanliness, and surgeons have done as much with common tap water as Lister with his carbolic spray. As for the carbolic acid, Hippocrates dressed his wounds with tar water, which is pretty much the same thing. Brain surgery is vaunted as the outcome of vivisection, another absurd myth. The surgery of the brain was well understood by Hippocrates and his school. Indeed, Professor Horsley told the Toynbee Hall audience in February, 1894 (as reported in the *Standard* of February 19th), that 5,000 years ago the men of the Stone Age carried out operations on the brain for the cure of fits, doing with no instruments but sharp flints what is now regarded as a difficult operation in surgery. How could the topography of the human brain be all mapped

out in animals who differ from us in nothing so much as in the development of the brain? How, for example, could the centre for speech be discovered in animals unable to talk? It has been claimed that the operation of ovariectomy by which thousands of women's lives have been saved, was discovered by experiments upon a dozen rabbits. This was a legend of Archbishop Magee's in the House of Lords—a legend with no basis in fact. The operation was the invention of Dr. Clay, who declared that vivisection had no more to do with it than the Pope of Rome. They tell us, these fertile scientific romancers, that Pasteur has discovered a cure for hydrophobia, and saved hundreds of persons from a horrible death by his inoculations. He would like to know in what country lived those persons so saved. Certainly it is not France, for since his system has been in operation the annual mortality from rabies has increased, and notably in that department in which the Paris Institute is situated. In comparison with Pasteur's Hydrophobia Cure "Mother Siegel's Syrup," and "The Pale Pills for Green People" are scientific medicines of the first rank. Such quackery as Pasteur's nostrum needs the pen of a Moliere or Voltaire to describe. It was beyond him, but people believe in it, as they believe in other well-advertised things. But time failed to tell the myths of a hundred operations, processes, and discoveries in surgery and medicine attributed to experiments on animals. The legends grow in magnitude and number from day to day, and they are fostered by a small but powerful sect of scientists, who hate the humdrum empirical work of the physicians, and the sober handiwork of classical surgery, and greatly daring, ever seeking some new thing whereby they may win fame and fortune, they leave the bedside for the laboratory, and try to learn by the agonies of animals what they might learn by legitimate but less brilliant methods. No man in his profession could hope to reach the top of the ladder without the aid of the practice he had endeavoured to expose. The practice is the fashion of the time. It will be ultimately discredited as other medical systems have been. Meanwhile he said that vivisection is founded in cruelty and maintained by falsehood. (Applause.)

Dr. GERARD SMITH cordially supported the opener of the discussion. He declared the surgical instinct to be a humane one, and said that having shot a pheasant soon after finishing his medical studies, his first idea was to take out his instrument case and perform an operation to save the creature's life. He told an excellent story of his student days, when he was assisting an eminent living vivisector in the laboratory of his medical school. A series of experiments were being carried out by feeding a number of dogs on gluten alone. He experimented very minutely, and carefully recorded the results of the research, and was extremely puzzled to account for some of them. He was not aware, however, that when the great man had left the hospital and gone home, Dr. Smith always gave the animals a good substantial meal of Spratt's dog biscuits. (Laughter.) To this day the vivisector thinks the animals waxed fat and flourished on gluten only. His observations, if recorded in any publication, would certainly be very misleading. Dr. Smith cordially thanked Dr. Berdoo for his lucid and interesting address, and expressed his gratitude for his appearance before them that evening. There was a little friendly opposition, dictated more by a desire to keep the discussion going than with a view to extenuate scientific cruelty. Messrs. Bishop, Dadd, Bacot, Wheeler, Tremaine, and Miss Villars took part in the discussion, and the meeting closed with a cordial vote of thanks to the lecturer, Dr. Smith, and the leader of the opposition.

"JUSTICE," SIMPLY.—"It is Mercy we extend to the erring and to criminals. What have animals done that we talk so much about "Mercy" being shown them? All that the animals would ask for, could they speak, would be simple Justice—to not punish them when innocent or unoffending; and to *torture* them, even if vicious, betrays a nature vile and ignoble. In all phases of cruelty there is a "reflex action" of the human soul which distorts it far beyond the writhings of the poor brute's tortured body. Let us be just to the innocent—and extend Mercy to the erring."—*Anti-vivisection.*

HOME INTELLIGENCE.

LONDON.

From *The Lady*, June 4th.

A correspondent writes:—"At a meeting of the 'Pioneer' Anti-Vivisection Society in Ebury Street, on Thursday last, Dr. Helen Bouchier in the chair, there was some brilliant speaking by both ladies and gentlemen. The clever Secretary first paid a hearty tribute to the late Mrs. Massingberd, then Miss Goff put forward, in the clearest and most temperate manner possible, certain facts vouched for by the vivisectionists themselves. Mr. Wood, of Wimbledon, followed, and urged, *inter alia*, that the slaughter of animals for food, and their torture in the laboratories are as different from each other as an execution at Newgate is different from the tortures of the Star Chamber. Of course, the Prince of Wales's speech at Guy's Hospital was largely discussed, several persons present pointing out that in the mouths of the interested, 'anæsthesia' means 'hyperæsthesia,' or the use of that most cruel drug curare; also that the inoculation of animals with human diseases results in lingering torments. Miss Goff, perhaps, clinched the matter when she affirmed that 'what is morally wrong cannot be physiologically right.'"

THE ANNUAL MEETING OF THE SOUTH LONDON ANTI-VIVISECTION SOCIETY.

The annual meeting of the above Society was held in High Street, Peckham, on June 4th, at 8 p.m.

The Rev. Mr. Paston took the chair, and was supported by the Rev. Lionel Lewis, Miss Jessie Craigen, and Mr. R. Somerville Wood.

After the CHAIRMAN had condemned the practice of vivisection, and doubted its boasted utility,

Miss CRAIGEN urged all anti-vivisectionists to make themselves felt as a power at the polling booths at the time of a General Election.

Mr. LEWIS, speaking as a minister of God, declared that though not an expert on matters of medicine, he did claim to be one in matters of morals, and as such he denounced vivisection as an offence in God's eyes. He further argued that people who were not doctors could weigh the evidence as to utility.

Mr. SOMERVILLE WOOD followed with a speech in which he pointed out the grave danger to hospital patients from vivisectional experiments on animals. He quoted the well-known case of how Sydney Ringer confessed to having tried the effect of nitrite of sodium on eighteen out-patients of a London hospital. Mr. Wood maintained that the Prince of Wales had been misinformed about the use of anæsthetics, and showed that many animals could not be kept entirely anæsthetised for a long time. As regards the Prince's statement that only mere inoculations were done without anæsthetics, Mr. Wood reminded the meeting that though the inoculation might be almost painless, yet the after results, when such a disease as, say, cancer was inoculated, would be of a very agonizing description.

A vote condemning vivisection was unanimously carried.

DERBY.

As the result of the meeting in this town on May 6th, a branch society has been formed and a committee appointed with the object of furthering the anti-vivisection cause. Great praise is due to Mr. F. Birch, who has worked most energetically throughout.

BOURNEMOUTH.

Steps are being taken by ardent friends of the cause in the Bournemouth district towards the formation there of a Branch, the Victoria Street and International Society. Miss Comerford Casey, of Grianan, West Bournemouth, is most kindly acting as hon. secretary *pro tem.*, assisted by her father the Rev. Comerford Casey, M.A., and Mrs. Comerford Casey. We hope all our friends in Bournemouth and elsewhere will make this known and do their best to promote the formation of a powerful branch in that influential and wealthy neighbourhood.

SCOTLAND.

PERTH.

On May 30th, in the Middle Parish Church, the Rev. L. F. Armitage, Edinburgh, delivered a special sermon under the auspices of the Scottish Society for the Total Suppression of Vivisection. The rev. gentleman denounced the act where it entailed great suffering, and quoted from the evidence given at the Royal Commission showing the different methods employed by vivisectionists for the sake of science.

EDINBURGH.

On May 30th the Rev. W. Main preached in St. Leonard's Church against scientific cruelty to a large congregation.

On June 13th Col. Waterston lectured in the Primitive Methodist Chapel, Victoria Terrace.

HAWICK.

On May 30th Col. Waterston lectured in Orrock United Presbyterian Church to a large congregation. A large supply of our literature was distributed at all the above meetings. Our Scottish friends are doing good work for us in the pulpit.

THE ANTI-VIVISECTION MOVEMENT IN READING.

(From the *Reading Observer*, May 29th.)

Under the auspices of the Reading and District Anti-Vivisection Society, a lecture was delivered by Mr. T. A. Williams (deputation of the Victoria Street Society, London), in the Schoolroom, Trinity Congregational Church, Reading, on Tuesday, the subject being "Vivisection: Cruel, Useless, and Dangerous to Hospital Patients." The Rev. Ambrose Shepherd presided, and there were also present: The Revs. J. Stratton, W. H. Rose and A. H. Cunningham, Mr. G. Ashdown, Mr. Tull, etc. The meeting having been opened with prayer,

The CHAIRMAN said that, personally speaking, he was exceedingly proud to be associated with such a movement as that in connection with which they were met that night. (Applause.) Of course he should be told by that new cult, which Ouida called "The new priesthood," the great federation of doctors, that he knew nothing about this question. In some respects they were quite right; but he dared say he had read as much and thought as much as a great many of those people who arrogated to themselves the right to say that he knew nothing about it. If it were a question of matching one's brains against another he ventured to think he had half the brains they had, and could draw a conclusion upon what he had heard and read. When they considered the cruelty inflicted on these animals it must be wrong according to the moral sense of everybody who judged that question. Of course, their friends the enemy told them there was but little cruelty about this question. They did not deny there was some, but it was so infinitesimal that it was, in their opinion, not worth troubling about; in fact, according to their theory some of the animals enjoyed it. He (the speaker) was abundantly fond of dogs, and if he gave up the ministry he did not know whether he should not go in for a dog menagerie. (Laughter.) Bull dogs had been his favourite species, and he should not mind the vivisectionists trying to experiment on one or two animals he had had, if they gave them full play with their teeth. (Laughter and applause.) It was impossible to say in the face of all the evidence they had—evidence which could not be disputed—that there was no torture. Coming to the scientific aims of the question, he would say again they could not be proved, because if an experiment be worth anything at all it must be without anæsthetics, and if there be experiments without anæsthetics it must mean torture. (Applause.) He believed that God ruled the world and made people, and if people would live sensibly he did not think that they needed the torture of animals to get knowledge. God had made the world beautiful enough on scientific principles to give them health, and he (the speaker) held that if a man simple wrecked his health out of simple recklessness and simple sensuality, then to torture animals to rectify the mistake was simply an anti-climax in morals. (Applause.) He was exceedingly glad

that they had Mr. Williams in the town ; at any rate, to work this subject ; and they certainly gave him a very hearty welcome amongst them. They welcomed all men who came on the side of humanity, and, as they believed, on the side of God. Mr. Williams was on that side, and on behalf of the Society they were met to support and especially in regard to humanity concerning animals, he had very much pleasure in asking him to address them. (Applause.)

Mr. WILLIAMS first of all claimed that there was in Reading a growing opinion that the pretence of the vivisection was not established. This was no fight for doctors, but for mercy and justice to animals. If the cruelty to the animals was difficult and gruesome to contemplate, what must be the actual cruelty inflicted on the animals themselves ? He had seen vivisection, and he certified it to be cruel and regarded it as a crime. The practise of vivisection was a method of inquiry that had been in vogue in this country for some considerable time. Thousands and millions of animals had been subjected to experimental research, and yet to-day the only thing that stood undisputed was the cruelty caused thereby. Vivisection had had a large time in which to justify itself by the results to be gained by the practice. Where were they ? Vivisection had had a long innings, until thirty years ago there arose an agitation against it, and in 1895 the Government of that day gave a Royal Commission to inquire into the whole case. If anyone read the evidence then given they would see that there was a vast deal of doubt as to the advantage of the practice to medical science. (Applause.) If they took the records of 1895 of experiments performed in England, they would find there evidence of the most atrocious pain which had been inflicted on animals, experiments as atrocious as it was possible to be committed being performed not only in Paris, but in every country of the world. The whole arguments for and against vivisection proved that the practice is cruel. It was true to say to-day that vivisection was being hotly disputed, not merely by sentimentalists, but the highly scientific minds. He quoted medical testimony, which was against the practice, and maintained that vivisection did not tend to help the surgeon one bit, but led him astray. In conclusion, he said that the donor of Palmer Park had done more for the physical advantages of the community than all the vivisectioners in the world had done. (Applause.) Mr. Williams then proposed the following resolution :—" Seeing that vivisection is misleading in its results, inseparable from cruelty and morally unjustifiable, this meeting records its protest against it, and is of opinion that the practice ought to be prohibited by Act of Parliament." (Applause.)

The Rev. A. H. CUNNINGHAM seconded the proposition. They knew, he said, that this great question was one in which, unfortunately, very few people took an interest, partly from ignorance of the subject. He urged that people should not shrink from this question, but do their best to protect animals in the interests of humanity itself. There were two sides to this question—the moral and the scientific side. The anti-vivisectioners were opposed to it primarily and chiefly on moral grounds. They looked upon the scientific side of the question as a subordinate one, and held that whatever the doctor said about the usefulness or uselessness of it, it was wrong morally and utterly unjustifiable, because it involved the most heartless cruelties, and cruelty was a crime. (Applause.)

The Rev. J. STRATTON supported the motion, and prefaced a few remarks with a reference to the Act concerning the control of vivisection in this country. Those people who denounced vivisection, but were slow to show their appreciation owing to the horrors connected with this practice, must screw up their courage and demand what was right as against wrong. He did not care for the Home Secretary or anybody else ; when wrongs were committed they must do their best to expose them. Their object was to put down cruelty. He quoted the opinions of well-known authorities in proof of the contempt and dishonour of this practice, and concluded by beseeching the audience to look into this question. It was a mighty question, and however much archbishops down to curates might shrink from it, and statesmen put it aside as a disagreeable question to deal with, they must fight it. (Applause.)

Mr. TULL also spoke in condemnation of the practice ; and the resolution was carried unanimously.

The meeting closed with a vote of thanks to the Chairman and the Lecturer.

During the past fortnight, various open-air and other meetings have been held, and several new members have been enrolled.

Other meetings have been held in the town during the week.

FOREIGN INTELLIGENCE.

INDIA.

BOMBAY.

BUISSONISM ENCOURAGED BY THE SOCIETY.

It is a sincere wish of some of the members of the Society to encourage the Buisson system of treating hydrophobia. They wish to set up a Buisson Institute in Bombay. It is hoped that a considerable fund will be collected, after the expiration of the present calamity.

Fifteen days ago three persons were bitten by a mad animal named *Kolah*, in Gaudevi, a town near Surat. Mr. Parmas, a member of the Committee, went there, and sent these three patients for the Buisson treatment to Dr. Bhalchandra K. Bhatwedkas, L.M., where this vapour bath treatment is available. These patients are well at present.

FILTH DISEASES CURED BY SANITATION.

The *Times of India*, May 7th, said :—" The plague is in full force at Cutch Mandvie. The *vecharnees* or gullies between the houses there are very narrow, hardly capable of allowing of a moderate-sized man passing in. These have been reported to be full of refuse, filth, and decomposing matter, more than a yard deep, the accumulation of years of neglect and abandoned sanitation. Unless this fruitful source of the breeding of plague-germs is forthwith removed, it is likely to act as a congenial element for increasing the virulence of the epidemic." The same journal on May 8th tells how the bacteriologists propose to combat this disease by inoculation. " A very large number of the labourers working in the Mora distilleries having been prevailed upon by their masters to undergo inoculation to protect them from the plague, the latter requested Mr. E. M. Carrel, supervisor of the Mora distilleries and chairman of the Mora Municipal Committee, to write to Professor Haffkine, and ask him to send a medical officer (preferably Dr. Kalapesi, if his services could be spared) to inoculate them. Agreeably to the request of the proprietors, our chairman addressed a letter to Professor Haffkine, who, on Thursday last sent across Dr. Kalapesi and Dr. Kuntuck to inoculate all those who might be willing to have the operation performed upon them. Over one hundred persons were in the course of a few hours inoculated in the school premises, which were placed at the disposal of the two medical gentlemen. Nearly the whole of those inoculated were 'khapsias' or workmen of the distilleries." This is modern medical science. Now, let us see from the same issue of the *Times of India* how successfully the plague can be stamped out by efficient sanitary measures. " For the last three weeks not a single case of bubonic fever has occurred in our midst. This terrible malady did not die out by flux of time, but was stamped out by vigorous sanitary measures enforced by Mr. E. M. Carrel. Although the disease made its appearance here (in a very virulent form in the beginning) long after it had broken out in Bombay, Kurrachee, and Poona, and simultaneously with the outbreaks at Panvel, Alibag, and other Konkan villages, we have been able to shake it off completely, whilst the three first named cities, notwithstanding the immense resources at their command, have the disease still lingering in their midst, and in the three last named it is raging furiously. Pinning his faith to segregation, to an abundance of sunlight, and to uninterrupted ventilation, and agreeing with Dr. Waters that dampness and moisture favour the growth and development of the plague microbes, whilst dry heat kills them, Mr. Carrel caused the roofs, thatched or tiled, of all the houses to be partially uncovered, induced the proprietors of the distilleries to keep fires lighted day and night in different parts of their distilleries, thoroughly disinfected the floors with carbolic powder, and lime-washed all the buildings and

fumigated them with sulphur. He segregated the Kolces and Native Christians, numbering some 700 souls, in healthier quarters, just outside the town, as soon as the plague broke out among them. But the beauty of it is that everything was done in a thorough manner, and he himself saw it done. The way in which this officer combated the plague for close upon six months, in addition to performing his own onerous duties as supervisor of the Uran distilleries, has called forth unstinted praise from the Collector and Assistant Collector of the district, as also from the Plague Committee, who were here the other day on inspection duty. Government itself cannot be too thankful to the supervisor for having saved the distilleries, from which it derives an annual revenue of upwards of 25 lakhs, from a visitation of the plague. If the fell disease had run riot in the distilleries they would have had to be closed, the owners would have been ruined, the Government would have been a loser to the tune of over a lakh of rupees every week—a sum it could ill-afford to lose at this juncture—while the workmen, numbering some 400 souls, and a large number of the townspeople, who depend for their living upon the work they get in them, would have been thrown out of employment, and forced to seek relief on famine works."

ITALY.

DEATH OF A PASTEURISED PATIENT.

We have obtained from *Il Secolo*, of Milan (June 2nd), particulars of another case of death from hydrophobia after treatment according to the Pasteurian method. The victim was a landed proprietor, native of Torpello, near Ventimiglia in the Riviera, G. B. Albini by name, a man 71 years of age. In February last he was bitten by a dog reported to be mad. After the lapse of a week he was sent, under medical advice, to the anti-rabic institution at Marseilles, and, after undergoing the treatment returned home. Feeling some incipient symptoms of the disease, which he is said to have feared, he resolved to return to Marseilles. He started on the 1st of June, but had only reached Mentone, where in the waiting-room of the railway station he was seized with a violent paroxysm. He was at once conveyed to the local hospital, where, after a night of dreadful suffering, he expired at six o'clock the next morning.

GERMANY.

EXPERIMENTS WITH REFERENCE TO THE INFLAMMATION OF THE INTESTINES.

The *Thier-und Menschenfreund* publishes the following from the *Deutsche Medicinische Wochenschrift*, No. 38, 1896, page 609:—The bacillus is fatal to both the white and the brown mouse. A small quantity of freshly prepared material introduced into the food causes the death of the mouse. After a period of one or two days the diarrhœa reduces the animal to a picture of abject misery. The diarrhœa is constant, the poor creature trembles in every limb, grows rapidly thin, and with saturated skin and rumpled hair drags itself about the cage, often falling down, until at last it crouches down and remains motionless. Sometimes five or six days elapse before death ensues. To assist the operation in the case of larger animals, a very fine glass powder is mixed with the food, and this in itself in some cases is sufficient to produce a fatal and deep-seated inflammation of the intestines.

SWITZERLAND.

The *Thier und Menschenfreund* publishes the final regulations as to vivisection issued by the Commission of the Zürich Canton Council. They are somewhat stricter than those originally issued, and this is no doubt due to the action of our Zürich friends. Vivisection is still permitted for teaching purposes in certain establishments, as well as for original research, but the experiments are to be restricted as much as possible, and a precise list of them to be rendered at the end of each term making mention of the objects for which they are performed, and of the animals operated upon. Where possible the experiments are to be rendered painless by the use of anæsthetics, and no animal is to be subjected to experiment more than once. Vivisection for the purpose of acquiring manual dexterity in the use of instruments is forbidden. The

regulations come into force at once, and infringement of them is punishable by a fine of from 10 to 500 francs, or if the offence is repeated the fine may be increased to 1000 francs accompanied by a liability to as much as three months imprisonment.

MORAVIA, AUSTRIA.

Copy of Minute sent from Berthelsdorf-Herrnhut to English friends, June, 1897:—

MINUTE OF THE DIRECTING BOARD OF THE MORAVIAN MISSIONS.

We, the members of the Moravian Mission Board, sincerely regret the great increase of the practice of Vivisection in the Medical Schools of Europe and America, as we believe that this practice tends to blunt the hearts of those who engage in it.

We therefore resolve:

That candidates for our Medical Missionary Service shall in attending any such schools, keep clear from such practices as far as ever possible; that our medical missionaries shall be distinctly informed of our views on this subject, both before commencing their medical training, and subsequently on entering on service in the fields; and that the teaching and practice of Vivisection shall be strictly prohibited in any hospital, college, or other medical institution connected with our Missions.

J. CONNER, B. ROMIG, A. G. BURKHARDT, CH. BUCHNER.
Berthelsdorf-Herrnhut, February 22, 1894.

REVIEWS.

IS SCIENCE GUILTY: OR, SOME OF THE SINS OF SCIENTIFIC CIVILIZATION. By AVORY W. H. FORBES, M.A. London: Marshall Brothers.

The author of this book has done a bold thing. He has arraigned Science herself before the bar of humanity. With much of the argument for the prosecution we do not agree, it does not concern us here to say why, but when the eleventh witness, Vivisection, steps into the box we recognize that Science is guilty of treason against the laws of the realm and the welfare of humanity. The pet daughter of Science has to answer for things of which the public must not be kept in ignorance. We must tell out the dreadful truth and persist in telling it "until the national conscience can endure it no longer, until the national will rises with indignation, and stamps out these hellish deeds that are done every day in the name of Science." The book is a very suggestive one in many ways and will well repay perusal, not because everyone will agree with all the author endeavours to maintain, but because it will make the reader think about many social problems, and to think seriously is the first step in altruism.

THE RETURN TO NATURE. By J. F. NEWTON. London: Ideal Publishing Union. 1897.

This is a reprint of a Vegetarian treatise published in 1811. As very little was known of physiological chemistry in the first decade of this century, and as the author says he makes no pretension to medical science, but has simply taken his own sensations for his guide, the work is little calculated to serve the Vegetarian cause in these scientific days. Vegetarians have a strong case physiologically and medically, and a still stronger case on humanitarian grounds, but it is a pity to injure it by such statements as the following: "All pump water is poisonous—the fetid animal oil I find in pump water" (p. 138). "The fetid breath which so many people have is not, as is usually supposed, from decayed teeth, but the lungs excrete the corruption from the blood caused by eating flesh."

PLEADINGS FOR DUMB PLAINTIFFS. By Edith Carrington. Published by the Society for United Prayer for Prevention of Cruelty to Animals, especially with regard to Vivisection: 158, Lancaster Road, London, W. Price ¼d. each; 5d. dozen; 3s. a hundred.

This is a very useful and pretty series of booklets dealing with the cruelties of the seal fisheries; cruelty to fish, cruelties of sport, etc. It is good to begin to interest people on the Animals' question by pictures like these. The stronger meat of the vivisection abominations is not adapted for every constitution.

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UNITED WITH THE
International Association
FOR THE TOTAL SUPPRESSION OF VIVISECTION.

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THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVII. No. 4.]

LONDON, AUGUST 2, 1897.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

AT a Special General Meeting of the Society, held at the Westminster Palace Hotel, on the 21st ult., the new code of rules was adopted, as reported on page 64.

THE Bishop of Southwell desires to thank "Anti-vivisection" again for the kind gift of £5 sent to him to be used for some good work at his discretion.

THE Rev. Theodore A. Howard, Vicar of St. Matthew's, Liverpool, a new and zealous adherent of our cause, has addressed a protesting letter to the Prince of Wales in reference to the remarks made by His Royal Highness at Guy's Hospital some time back. The letter was ably drawn and the points were well put, Mr. Howard drawing attention to some of the experiments perpetrated under the present law and reported in the *Journal of Physiology*. Our space does not admit of our reproducing the letter, which was acknowledged by General Sir F. Knollys, and which has been published in the *Liverpool Courier* and the *Sunday Times*.

THE number of physiologists at work at Cambridge has always been large, and the appearance of the annual

return has shown that a number of young men have been enlisted and apparently "tried" there. We now learn on the authority of the *Lancet* (June 19th) that "Michael Foster established a school of young physiologists at Cambridge." This school has been carried on very quietly, but now the fact is confessed, it verifies the suspicion we have long held that Cambridge was a training ground for budding vivisectioners. It is painful to think that one of the great centres of learning should be used to initiate young men into work of this gruesome kind.

THE Illinois Society, whose headquarters are at Aurora, is now well-known in this country and on the Continent, through the unceasing activity of Mrs. Fairchild Allen, the energetic secretary. Its fifth annual meeting was held on the 4th of June, and from the Secretary's report then presented, it appears clear that good progress is being made. A prominent feature of the work done has been the collection of signatures to a national petition for the total abolition of vivisection. Among those who have given in their adhesion to the petition are no fewer than 558 medical men. The Society was reorganized for another year's work, and the names of the officers, with other details, will be found in our news columns.

DR. CAMPBELL BLACK, Professor of Physiology at Anderson's College Medical School, Glasgow, has been deprived of his Chair by the Governors on account of his criticism of the germ theory of disease and of Listerism in particular. The right of private judgment, however esteemed in matters of religion, is evidently denied to doctors now-a-days.

THE Editor of the *British Medical Journal*, in its issue of June 16th, regretted to learn that the National British Women's Temperance Association, at its recent meeting, passed resolutions against vivisection. The temerity of British women who, not only abstain from alcohol without asking permission from distillers and wine merchants, but actually protest against vivisection without the consent of the British Medical Association, leads us to believe that they will not hesitate to sooner or later liberate themselves from slavish obedience to the medical profession in other matters, and then the days of the vivisectioners will be numbered.

COMING so soon after the important pronouncement of the Moravian Mission Board, which we published in our last issue, the following is very cheering:—

"The Council of St. Hugh's Hall, Oxford, has accepted from Miss Clara Evelyn Moidan an offer of £1,000 for the endowment of a scholarship which is to bear her name. The only condition attached by the donor is that the scholar during her

tenure of the scholarship shall have nothing to do with vivisection. St. Hugh's Hall was founded in 1886 by Miss Wordsworth, but was not regularly constituted till 1894. Like Lady Margaret, it is conducted on the principles of the Church of England, but being intended primarily for poorer students, the fees are lower."—*Athenæum*, July 10th.

LADY BURTON, in *The Romance of Isabel, Lady Burton*, says (p. 588), relative to her travels in India, "A very interesting visit for me was to the Pingrapole or hospital for animals sick, maimed, and incurable. It was in the centre of the native quarter of Bombay, and was founded forty years ago by Sir Jamsetji Jijibhoy, who also left money for its support. I was told that the animals here were neglected and starved; but we took them quite unawares, and were delighted to find the contrary the case. There were old bullocks here that had been tortured and had their tails wrung off, which is the popular way in Bombay of making them go faster. There were orphan goats and calves, starving kittens and dogs. The blind, the maimed, the members of the animal creation, here find a home."

PASTEUR, on one occasion, carefully washed his grapes to remove bacteria, and then absent-mindedly drank the water in which he had cleansed them! "Pettenkoffer," says the *Medical Brief*, "drank a glass of water containing a choice collection of virulent germs, and another member of the profession has had germs of various malignant and infectious diseases injected into his body without results." The microbe-crank, who is the victim of the tyranny of an intangible force, should take these facts to heart.

Two months ago we published in the *Zoophilist* full reports on the procedure adopted by Koch in regard to rinderpest at the Cape, and the judgment thereon of experts on the spot, who had no confidence in the new nostrum prescribed. Since then another opinion has been elicited, which puts the local objections to Koch's process in Natal in a strong light. On the 28th of June the *Daily News* published a conversation one of its representatives had had with Mr. Escombe, Premier of Natal, then in England. Referring to the rinderpest in South Africa, the interviewer remarked:—

"I notice, Mr. Escombe, that you do not say anything of Dr. Koch's supposed remedy among your preventatives. Do you believe in it?"

Mr. Escombe's reply was very emphatic and was as follows:—

"Dr. Koch's remedy is as yet only in its experimental stage. Natal subscribed its share towards the cost of bringing Koch out to South Africa, but whether his discovery will do anything towards neutralizing rinderpest I cannot yet say. I do not name it among the preventatives because we do not propose to start introducing diseases among our cattle while they are still healthy. That is what inoculating them would mean. In Natal we are doing our best to keep rinderpest out altogether, but if it should come it will not overwhelm us. We will be well prepared for it, though we do not believe in going out to meet trouble before it arrives. Half the evils of this life are caused by people dwelling on anticipated troubles that never come."

THE central nervous system of the higher animals may be roughly said to consist of the greater and lesser brains and the spinal cord. In anatomical language the first and second of these are termed the cerebrum and cerebellum. To determine precisely what are the functions of these, and how far each of them is necessary to life, a

great number of very cruel experiments have been performed, and are, indeed, still being carried out. The whole of the greater brain has been carefully removed with minute precautions, and the animal has lived and exhibited unmistakable signs of being able to move about and avoid obstacles without a brain. The lesser brain has been taken away, and the animal has managed to walk, fly, and turn, although imperfectly. Psychologists have argued from these experiments that the brain is the seat of the objective faculties; the logical, reasoning functions are centred in the brain. The spinal cord has been held to be the seat of the subjective mind; instinct and all the lower vital processes seem to have their centre in the cord.

MR. F. J. HUDSON, in his *Scientific Demonstration of the Future Life*, has explained in a popular way the nature of these mutilation experiments, and what he considers to be their psychological value. He records many cases of headless animals and of human infants born without a brain, which have, nevertheless, lived and thriven merely by the spinal cord. But Professors Goltz and Ewald, of Strasburg, have recently been able (Pflüger's *Archiv*, lxi. p. 362) by means of consecutive operations to remove from dogs the sacral, lumbar and thoracic parts of the spinal cord, and maintain such dogs in life and health (?) for several years:—

"Obviously, this being so," says the *Medical Chronicle* (June, 1897, pp. 228-29), "contrary to what is generally accepted, for the maintenance of life the sacral, lumbar and thoracic portions of the cord are not necessary. . . . A dog so robbed of the greater part of its spinal cord was shown by Professor Ewald at the Physiological Congress at Berne in 1895. . . . It is possible by cutting the cord at different times . . . to practically divide the animal into three segments."

WE do not hesitate to declare that all these experiments are as useless as they are cruel. No good purpose has ever been, or can be served by such barbarous mutilations. There is not a single physiological fact demonstrable by them which has not been shown over and over again by the ravages of disease or the destructive processes consequent upon accidents. A childish curiosity, dignified by the name of scientific research, has dictated such experiments, and they are not in the least likely to lead to any improvement in surgical procedure.

AN important debate as to whether the Pasteurian inoculations for hydrophobia give the disease in a paralytic form, arose in the Academy of Medicine of Paris in June last. At the meeting held on the 15th of that month M. Rendu reported a case of acute ascending paralysis brought on by the anti-rabic inoculations. The patient was a *post-mortem* room porter at a hospital, who, in the course of examining the body of a man dead from acute rabies, pricked his finger. Although the wound was carefully washed with an antiseptic solution, he betook himself to the Pasteur Institute, and, starting on March 22nd, underwent the regular course of anti-rabic treatment. Quite suddenly on April 1st he developed rigors and fever, which grew worse on the following day. The patient took to his bed, and the gradual progress of the disease, accompanied by the most alarming symptoms, was observed, paralysis of first the lower and then the upper limbs, paralysis of the sphincter, vomiting, distress, sense of suffocation, etc., but with only a slight

rise of temperature. Nevertheless, the injections were continued in doses of 2 c.c. per diem, and the patient was cupped and treated with antipyrin. On the seventh day after the onset of the symptoms a marked improvement set in, and he was completely restored to health in three weeks' time. M. Rendu's explanation of the case was that the man's body was in a morbid state, and that the symptoms were the result of the inoculations.

Two Pasteurian doctors, Messrs. Roux and Grancher, defended their nostrum, of course, and M. Brouardel, both then and at a subsequent meeting, attempted to explain away the imputation on the Pasteurian treatment. Dr. Lutaud, however, examined the facts of the case in the *Journal de Médecine*, and came to the conclusion that "It is certain that if the unfortunate hospital porter had not been submitted to the treatment of Pasteur he would not have been attacked with paralytic rabies." He went on to cite three other fatal cases resulting from the same disease, after treatment by the Pasteurian method, which had occurred in the month of April last. Dr. Lutaud also stated that during the last ten years not only had the Pasteurian treatment for hydrophobia not lessened the mortality, but that the mortality had become greater in spite of it.

THE bacteriological experimenters never seem satisfied with the results of their researches, but repeat them with an iteration which is as nauseous as it is cruel. It seems to have been proved that animals can be infected by feeding with tuberculous meat and milk. Dr. William Murrell says (*Medical Brief*, July, p. 994) that "the credit of first inducing tuberculosis experimentally is due to Klencke, who, in 1843, made a valuable series of observations on the subject." In 1865 Villemin published a set of carefully-planned experiments on the same lines. Then Chauveau obtained identical results. Yet Dr. Sims Woodhead reports exactly similar experiments, says the *Pall Mall Gazette*, of July 12th:—"Twelve guinea-pigs were inoculated, and twenty-one fed with a solution of tuberculous meat. Of these, eleven in the first case and sixteen in the second developed tubercle." This may be research, but it is certainly not progress.

IN the city of St. Louis, says the *Medical Brief* (July, p. 1,002), there is an increasing mortality from diphtheria notwithstanding the liberal distribution of anti-toxin. Physicians seem to have overlooked the fact that Dr. Burggraeve, of Ghent, Belgium, many years ago treated his cases with sulphuret of calcium and obtained quite marvellous results, the mortality seldom being in excess of two per cent. The *Medical Brief* asserts that this remedy possesses a remarkable effect on the diphtheritic poison, and urges its employment in place of anti-toxin. We fear that the value of this treatment will avail little against the fashionable serum fad.

Guy's Hospital Gazette for June has a note on the Prince of Wales and vivisection:—

"The Prince," says the writer "like every decent-minded gentleman, detests cruelty in all its forms; and he is in the fullest sympathy with those who wish to see that there is no recklessness in our laboratories, and that experiments are conducted only under direct legal supervision."

We have never charged the experimenters with "recklessness"; carelessness and negligence are the last epithets we should use towards modern researchers. It

is the elaborately thought out and deliberately conducted, prolonged torture of which we complain, and this "under direct legal supervision."

IN the description of the New School Buildings opened at Guy's by the Prince, we find the following account of one of the physiological laboratories:—

"This room, which is exceedingly well lit, is specially adapted for experimental work, and is supplied with shaftings and pulleys, to drive the various recording apparatus, etc., which are used in research."

THE *Medical Chronicle*, June, 1897, p. 232, says in a review of some physiological papers by Messrs. Pfaff and Balch:—

"Here, indeed, we have a sharp contrast between these observers' results and the experiments made on dogs by many observers. The conclusions of Roehrig and Rutherford (from experiments on dogs) they say are based on faulty suppositions and therefore should not be sustained any longer."

"Sharp contrast" is a good term. The physiologists have long found the *Zoophilist* abundant work in pointing out these "sharp contrasts." That between common sense and experimental physiology has always seemed the most prominent of these contrasts.

MR. H. C. CUMMELL, F.R.C.S., in a paper on Aseptic Surgery in the *Medical Magazine* for June, says (p. 441):—

"The purest air, from a bacteriological point of view, in the city of Berlin is found in the sewer under the Potsdam Square, which has been found either to contain no germs at all or only a few solitary ones."

It follows, therefore, that when change of air is recommended for convalescents a few weeks sojourn in the Berlin sewer would be better than a visit to Zermatt. But a bacteriologist is nothing if not paradoxical.

THE New York *Medical News* (July 3rd) is distressed at the good prospects of the Bill before Congress Abolishing Animal Experimentation in the District of Columbia. It says:—

"It is one of the many illustrations of the fact that a small association of persistent individuals, especially if it contains within its numbers a few visionary women, can, by gaining the adherence of two or three strong advocates, carry almost any measure through any State Legislature or even through the National Congress, unless it is met and opposed by some scheme of what is known as practical politics."

Our readers will notice the acknowledgment of the power and persistency of women in work of this kind. We congratulate our American lady friends on their determined efforts to suppress scientific cruelty.

DR. HANSEMAN, in a paper read before the Berlin Medical Society (See *American Year Book of Medicine*, 1896, p. 540), said he did not believe the Loeffler bacillus was the sole cause of diphtheria. It is not present in every case; it is never alone; and it may be found when diphtheria does not exist. He added that "animals act very differently from man towards poisons, and it is not diphtheria that is cured in the animals but the sickness produced by the Loeffler bacillus." He concludes that there exist no scientific, theoretic, or experimental grounds for accepting the diphtheritic serum as a specific remedy against diphtheria in the human race. "The remedy can at times do harm, for it exerts a destructive influence on the blood and acts injuriously on the kidneys."

THE *Medical Magazine*, for June, laments (p. 408) that antitoxin does not make headway as it should. "Much no doubt yet remains to be done to induce the public and even the profession to give the antitoxic treatment a fair and just trial. It is not too much to ask that every suspicious case should be subjected to the antitoxin treatment at the earliest possible moment, and so strengthen the hands of those who are devoting such arduous labour to this branch of science" (italics ours). Note that "every suspicious case" is to be inoculated "at the earliest possible moment" to "strengthen the hands" of the preventive medicine people. As a fact, great pressure is being put upon doctors to use antitoxin now. The Metropolitan Asylums Board supplies it free for use on the poor.

THE *Medical Brief* for July is justly severe on the dishonest method of preparing Pasteurian statistics of rabies which prevails. Our outspoken contemporary says:—"The death from rabies of eight patients sent to the New York Pasteur Institute is a significant commentary on the value of this treatment. The report of these cases also discloses the fact that all deaths from the disease are eliminated from the statistics as irregular, while those who show no traces of rabies are put down as cures. Then the number of patients treated during the year 1896 is put down at 236, all cures, and the number of deaths as zero, notwithstanding the cases above recorded." This out-Pasteurs Pasteur. They do admit an occasional death or two in the Rue Dutot; at New York as nobody has any business to die after inoculation they do not die in the statistics, but only in their persons!

THE Chicago *Journal of the American Medical Association* gravely discusses in a leader the question of our sanity. The title of the article is "Antivivisectionist Sentimentality and Brain Deformity in the Degenerate," and it commences thus:—"A degenerate recently executed for murder at Paxton, Ill., has had his mental soundness doubted because of his sentimental kindness towards animals." The writer goes on to show that all great criminals have manifested some affection for animals. Prisoners cherish mice, spiders, birds, and also flowers, etc. As prisoners are "degenerates" and love animals, we animal lovers or Zoophilists must be degenerate, and Vivisectionists only are *compos mentis*.—Q.E.D.

DR. CUSHNEY, says the *Journal of Experimental Medicine* (May, 1897), has made a large number of experiments upon the heart and circulation in cats, rabbits, and dogs. In some cases the chest was opened and the heart observed directly, artificial respiration being kept up. Morphia was in all cases used as a narcotic in cats and dogs. It is to be noted that Dr. Cushney does not call morphia an anæsthetic. Urethane was employed for rabbits, "and in some cases acetone-chloroform was also given."

THAT bacteriological experiments are not of the innocent "prick of a needle" class described by the Inspector in his Annual Report is made clear in Professor Crookshank's new edition of his "Bacteriology." He says, with reference to inoculations, that it is "in many cases absolutely necessary to perform an operation of greater severity" than the pricking of the hypo-

dermic needle, and that the infective material may be inserted or injected into the peritoneal cavity, or injected into the duodenum, thus introducing the diseased matter directly into the abdomen or the bowel of the animal. Again he tells us:—

"The first steps of the operation of iridectomy may be performed, and tubercular material inserted into the anterior chamber of the eye, but this method is only justifiable when it is absolutely necessary for the results and changes to be observed from day to day."

IN the *Semi-Centennial of Anæsthesia* (Boston, 1897). Dr. W. H. Welch says (p. 67):—

"Curare is a drug which has important uses in a certain class of experiments upon animals. It has never been claimed by any scientific man that it is an anæsthetic.

"Its use has led to important physiological discoveries which could not well have been made without it, and in a limited class of cases its employment, either with or without the coincident addition of anæsthetics, is indispensable."

IN the *Journal of Physiology*, vol. xxi., p. 323, *et seq.* Messrs. Leonard Hill and Harold Barnard, Physiologists of the London Hospital Medical College, publish a paper on "Gravity and the Circulation." The writers begin by saying that "The physiology of the circulation has hitherto been almost entirely studied in animals placed for convenience of work in the horizontal position." That is to say lying on the dog-holder or trough. They proceed to say that previous investigators have arrived at conclusions which are "entirely fallacious," as there is an appreciable difference in the phenomena of the circulation when the animal is in the vertical feet-down posture and when in the horizontal position. This naturally affords the experimenters an opportunity of upsetting the conclusions of their predecessors in this line of research. "Absolute nothing is the aggregate of all the contradictions of the world," and it is to this the physiologists are bringing their science.

THE experiments were performed upon dogs, cats, and rabbits. Glass tubes were passed down the jugular vein and carotid artery, the tubes were connected with manometers and a recording apparatus. The vagi nerves were cut, the spinal cord divided, the abdomen and chest were opened, curare injected, artificial respiration performed after opening the throat, nerves stimulated, and so on.

WE are told (p. 325) that chloroform and ether were employed "during all operative procedures," that is to say while the chest and belly were laid open, the nerves exposed, etc. Now comes the important caution. "It is absolutely essential that chloroform should not be administered during the periods of observation, for there is no other agent known to us that so rapidly abolishes the mechanisms which compensate for the influence of gravity, as chloroform" (italics ours). We are given to understand that morphia was the drug used "during the periods of recording observations." Morphia, we are told, "has the advantage of acting as an emetic on dogs," so that what little stupefying effect the drug may have on the victim is lessened by the vomiting produced. On p. 342 we have the instructive remark that "in all our experiments the administration of chloroform markedly prolongs the period of complete cardiac inhibition [heart restraint]. This is in direct contradiction to the conclusions arrived at by the Hyderabad Commission. The scientific pre-

cautions which are required in such comparative experiments, do not appear to us to have been taken by the Commission." Of course not.

We learn from the *London Hospital Gazette* for July that Mr. Leonard Hill has been offered the Lectureship on Physiology at the London Hospital. Mr. Hill's name appears in the Inspector's Return for 1896, as having performed ninety-six physiological experiments in that year, sixty-eight under license and twenty-one under certificate B (dispensing with the obligation to kill the animal before recovering from anæsthesia). This gentleman was, conjointly with Mr. Bayliss, the experimenter whose proceedings were the subject of some questions which Mr. Weir recently asked the Home Secretary in the House of Commons.

THE *London Hospital Gazette* congratulates Mr. Hill on his appointment of Examiner in Physiology to the Conjoint Board of the Colleges of Physicians and Surgeons. This means that every student presenting himself for examination will have to satisfy a licensed Vivisector as to his knowledge of physiology.

THE above-mentioned *Journal* has an article "In Praise of Anatomy in the Olden Time," in which we are told that the old school of anatomists is "the only school that ever learned anatomy that it might learn how to cure." The writer points out that the reactions of man's nearest allies in the mammalian kingdom to the diseases to which human flesh is heir, are scarcely known, and urges that oranges, being man's nearest relations, would best afford reliable data to the experimental human physiologist. The monkey department at the Zoo will probably compete with the clinical wards of our hospitals for the attentions of the experimental physiologist.

DR. G. GHILLINI reported to the Paris Biological Society, May 29th, 1897, that he had cut the sciatic nerve in a number of rabbits two months old. He said "Some of these animals were subsequently, during the whole duration of the experiment, enclosed in small cages, where they had no space for moving about." The object was to discover if the paralysed limbs were longer than those on the opposite side.

DR. J. W. LOCKHART, writing in the *Medical Brief* for June, declares that the germ theory of disease is exploded. Bacteriologists insist that the germs are the cause of the disease, the old opponents of the theory maintained that they were the consequences of the malady.

There seems to be a good deal to be said for the third and newest theory that:

"the so-called disease germs are really innocuous, incapable of producing disease, and their virulence, when they are virulent, is due entirely to the disease products they have absorbed from some external source, or possibly to some disease peculiar to themselves but not transmissible to the human subject. The germs do not produce disease in the human subject, but the sick human subject poisons the bacteria that scavenger his toxic excretions."

It is well known that many bacilli considered to be virulent, such as the Loeffler bacillus, are often found in healthy throats, and are not capable of reproducing the disease. Dr. Roux, it is said, has come to the conclusion that the change in bacilli from non-virulent to virulent, and *vice versa* is the rule rather than the exception. We may say, therefore, with Dr. Lockhart, that "At last a ray of light appears."

Obituary.

MRS. EMPSON.

WE very deeply regret the death at The Cottage, Danglish, Devon, of Mrs. Empson, widow of the late William Empson, Esq., barrister, and of the East India College, Haileybury, Herts, at the advanced age of eighty-three. For very many years this kindly lady had been one of the Society's staunchest and most generous supporters, and always took a very keen interest in the progress of the Cause. We can ill spare her.

"CHEAP ARGUMENT" IN SUPPORT OF ANIMAL TORTURE.

"He spoke of Professor Fortescue with enthusiasm, praising his great power, his generosity, his genial qualities, and his uprightness; then he laughed at him as a modern Don Quixote, and sneered at his efforts to save animal suffering when he might have made a name that would never be forgotten if he pursued a more fruitful branch of research.

Hadria remarked that Professor Theobald's last sentence had added the crowning dignity to his eulogium.

He glanced at her as if taking her measure.

"Fortescue," he called out, "I envy you your champion. You point, Mrs. Temperley, to lofty altitudes. I, as a mere man, cannot attempt to scale them."

Then he proceeded to bring down feminine loftiness with virile reason.

"In this world, where there are so many evils to combat, one feels that it is more rational to attack the more important first."

"Ah! there is nothing like an evil to bolster up an evil," cried Professor Fortescue; "the argument never fails. Every abuse may find shelter behind it. The slave trade, for instance, have we not white slavery in our midst? How inconsistent to trouble about negroes till our own people are truly free! Wife-beating? sad; but then children are often shamefully ill-used. Wait till they are fully protected before fussing about wives—protect children? Foolish knight-errant, when you ought to know that drunkenness is at the root of these crimes! Sweep away this curse before thinking of the children. As for animals, how can any rational person consider their sufferings, when there are men, women, and children with wrongs to be redressed?"

Professor Theobald laughed.

"My dear Fortescue, I knew you would have some excuse for your amiable weaknesses."

"It is easier to find epithets than answers, Theobald," said the Professor, with a smile. "I confess I wonder at a man of your logical power being taken in with this cheap argument, if argument it can be called."

"It is my attachment to logic that makes me crave for consistency," said Theobald, not over pleased at his friend's attack.

Professor Fortescue stared in surprise.

"But do you really mean to tell me that you think it logical to excuse one abuse by pointing to another?"

"I think that while there are ill-used women and children, it is certainly inconsistent to consider animals," said Theobald.

"It does not occur to you that the spirit in man that permits abuse of power over animals is precisely the same devil-inspired spirit that expresses itself in cruelty towards children. Ah," continued Professor Fortescue, shaking his head, "then you really are one of the many who help wrong to breed wrong and suffering, to foster suffering all the world over. It is you and those who reason as you reason, who give to our miseries their terrible vitality. What arguments has evil ever given to evil! What shelter and succour cruelty offers eternally to cruelty!"—From "*The Daughters of Danaus*," by Mrs. Mona Caird, pp., 217-219.

TRUE AND FALSE ANÆSTHETICS.

IS MORPHIA AN ANÆSTHETIC?

As the vivisectionists are now claiming morphia to be a true and sufficient anæsthetic, and using it as such in their experiments on living animals—we have recently had some controversy on the subject. The following correspondence will be read with interest:—

Copy of letter addressed to medical men whose letters are quoted below.

20, VICTORIA STREET, LONDON, S.W., 17th May, 1897.

DEAR SIR,—I am having a controversy with some pro-vivisectionist doctors as to the efficacy of morphia as an anæsthetic. The point is, is morphia a sufficient substitute for chloroform or ether in the case of a severe experiment such as that quoted in pp. 1. and 2 of the pamphlet herewith enclosed?

In your opinion would a hospital surgeon recognize morphia as sufficient in the case of an operation of similar severity on a human patient? I ask this because the contention of our adversaries is that in experiments on living animals the same care and attention to mitigate their sufferings are adopted as in the case of human patients.

Your answer for my information and guidance will be greatly esteemed by,

Yours most faithfully,

SIDNEY G. TRIST, Assistant Secretary.

P.S.—“Webster” and the “Encyclopædia Britannica” say that—“to anæsthetise is to render insensible by chloroform, sulphuric ether,” etc., “an anæsthetic is capable of rendering insensible by being inhaled.” S. G. T.

This was the experiment referred to:—

Messrs. Bayliss and Hill record in the *Journal of Physiology* (Vol. XVIII., p. 337, *et seq.*), their “Method of Research,” on the circulation in the skulls of dogs. They say:—

“Throughout the experiments morphia was the anæsthetic used. The method of procedure of the experiments was as follows:—‘A cannula [metallic tube] was placed in the central end of the carotid artery [which conveys the blood flowing from the heart to the head]. A second long cannula was passed down the external jugular vein and on the same side, into the right auricle. The torcular Herophili [the confluence of the sinuses of the skull] was trephined and a third cannula, this time of brass, was screwed into the hole thus made [in the dog’s skull].’

“We carried on the research in the following way: (i.) We divided the vago-sympathetic nerves and stimulated the central end in both the curarised and the uncurarised animal. (ii.) We divided the spinal cord in the upper dorsal region at a level of the second to the sixth dorsal nerves, and we stimulated, either the central end of the cord, or the vaso-motor centre in the bulb. (iii.) We planned a new method of stimulating the cervical sympathetic nerve. . . . In the experiments carrying out this last method, the animals were placed under morphia and then lightly curarised and artificial respiration supplied.

“The thorax [chest] was then opened in the middle line, and weighted hooks were used to keep the walls of the cavity [of the chest] well apart. The heart was protected from exposure by a pad of cotton wool. The sympathetic nerve was then caught up . . . and tied. The nerve was then divided [and electricity applied].

“We have noticed in the case of an animal, if insufficiently curarised, that the slightest attempt at respiration on its part will raise the cerebral venous pressure, and this (unless carefully guarded against) may possibly be a source of error.

“Administration of chloroform produces a fall of arterial pressure and a rise in the general venous pressure. Ether produces a slighter fall of arterial pressure.”

Copies of the Replies.

332, OXFORD ROAD, MANCHESTER, May 18th, 1897.

DEAR SIR,—Your question admits of a very plain answer.

Morphia is not an anæsthetic, and would never be described as one by surgeons. The notion of performing an operation of the nature described in the extract you send me, on a human patient, with morphia in the place of chloroform or ether, is utterly preposterous, and the description of morphia by the experimental physiologists as an anæsthetic, when detailing atrociously severe experiments, is simply fraudulent and dishonest.—Yours faithfully,

F. S. ARNOLD, M.B. (Oxon).

175, CLAPHAM ROAD, S.W., May 18th, 1897.

MY DEAR TRIST,—I have much pleasure in forwarding as much of the information you require as I can. Anæsthesia is a term meaning loss of sensation, and we generally distinguish between general and local anæsthesia. General, when the whole person is rendered unconscious; local, when a small area, generally near the surface, is affected for a small local operation. Now in its wider, and I might say real meaning, such substances as chloroform and ether are necessary, and in this sense morphia would never be spoken of as an anæsthetic, *i.e.*, long before such a complete state of anæsthesia was acquired the life would at the least be greatly jeopardized. Moreover, we know that patients in the grip of morphia can be roused by smacking, pinching, and walking (not so in chloroform). Morphia relieves pain; it has some influence on the nervous system, and gives a sense of comfort. For this reason, in combination with cocain, etc., it is used for local operations of an insignificant nature. I have never known it used by itself for this purpose, and am positive that for a *Major* operation where general anæsthesia is required, nobody would be such a fool as to use morphia on the human subject. It must be remembered, moreover, that all these things have special influence on special animals.—Yours very sincerely,

ARTHUR A. BEALE, M.B., C.M.

TYNEMOUTH HOUSE, VICTORIA PARK GATE, LONDON, E.,

June 16th, 1897.

DEAR MR. TRIST,—The “Encyclopædic Dictionary” defines “anæsthetics” as a class of medicines which, when inhaled in the form of vapour, destroy consciousness for a time, and with it the sense of pain. . . . The best known are chloroform, ether, and protoxide of nitrogen (nitrous oxide). Etymologically anæsthesia means, of course, incapacity of feeling. But morphia, except in poisonous doses, does not confer this incapacity. Claude Bernard says of a dog under the influence of this drug, and subject to an operation, “He feels the pain, but has lost the idea of self-defence.” I have no hesitation, therefore, in saying that no hospital surgeon would recognize morphia as sufficient in the case of an operation of similar severity to those which you quote from the *Journal of Physiology*.—Yours faithfully,

EDWARD BERDOE, L.R.C.P. (Ed.), M.R.C.S. (Eng.).

ANDERSON’S COLLEGE MEDICAL SCHOOL,

DUMBARTON ROAD, PARTICK, GLASGOW.

May 18th, 1897.

S. G. TRIST, Esq.

DEAR SIR,—I am in receipt of yours of the 17th inst., in reply to which I beg to state that I cannot regard morphia as a substitute for chloroform as an anæsthetic.—I am, yours faithfully,

L. CAMPBELL BLACK, M.D.

F.R.S. Edin., Professor of Physiology in Anderson’s College Medical School, etc.

17, KENSINGTON GARDENS SQUARE, BAYSWATER, W.

May 20th, 1897.

SIDNEY G. TRIST, Esq.,

DEAR SIR,—In reply to your letter of the 17th, I have to state that no surgeon would perform upon a living human being the operation described on page 1 of your “Specimens of British Vivisection,” as under no conceivable circumstances could such a purely experimental operation be justified. As the patient would die it would be criminal.

In my opinion, no hospital surgeon would dare perform an operation on a living body, involving so much disturbance and

pain, under morphia. The most that can be said for morphia under such circumstances is that it diminishes the sensibility of the animal to suffering, but it is not an anæsthetic in the sense that chloroform and ether are.—Believe me, yours most faithfully,

ALEX. BOWIE, M.D., C.M., etc.

30, CLARGES STREET, W., May 17th, 1897.
S. G. TRIST, ESQ.

Certainly not. In order to produce a sufficiently stupefying effect morphia must be given in a dangerously poisonous dose. If morphia and opium are true anæsthetics, where is the virtue in the discovery of the uses of ether and chloroform?

JOHN H. CLARKE, M.D., C.M., etc.

63, UPPER BERKELEY STREET, PORTMAN SQUARE, W.

18th May, 1897.

DEAR SIR,—In reply to your note of yesterday's date I may say that morphia cannot be employed as an anæsthetic, for to cause insensibility to operations it would have to be administered in a dose that would materially interfere with the functions of important organs and be dangerous to life.

No surgeon would think of administering opium or morphia to cause insensibility to operations. Were he to do so he would be universally condemned by his colleagues.

No doubt in pre-chloroform days the vegetable narcotics were sometimes tried for the purpose of lessening the pain of operations, but they are universally abandoned for that purpose in favour of chloroform, ether, and the like.—Yours faithfully,

R. E. DUDGEON, M.D.

Sidney G. Trist, Esq.

SPRING GROVE HOUSE, UPPER NORWOOD, S.E.,
18th May, 1897.

DEAR MR. TRIST,—With reference to the question of anæsthetics and the improper manner in which some vivisectionists now use the term, I may mention that when Dr. Newton Parker was called upon the platform at the Debate at the South Place Institute, a little over a week ago, he endeavoured to justify such use of the word. In reply I challenged him to name any medical text book in which morphia was described as an anæsthetic, to which he made no reply. The fact is that every attempt which has hitherto been made to substitute narcotics like morphia for apparent destroyers of sensation like chloroform, ether, and nitrous oxide, has only brought the medical attendant into trouble; nor is it possible for him to introduce such a notion into his private practice. Need I say that the patient from whom he receives his fee would be the last person in the world to appreciate such a transparent fraud as the pretence of relieving his sufferings when under a painful operation, when in fact every cut is felt, and accompanied by a corresponding expression of pain. You may take it as fully established that no animal whatever can be anæsthetized by morphia, however much they may differ in their reaction against some poisonous drugs, and that any man who describes an operation performed under either morphia or curare as without pain to the animal used is not only deceiving the public but is deluding himself into the bargain. This is the horn of the dilemma which must be chosen if he does not desire to be described as a walking imposture.

ED. HAUGHTON, M.D., B.A.

195, NEWHALL STREET, BIRMINGHAM, 20th May, 1897.

DEAR MR. TRIST,—In the human subject no man in his senses would use morphia for the purpose of diminishing the pain of any operation. It could not be successful until a dose was administered which would be almost certainly poisonous. In experiments on animals any such substitute for an anæsthetic would vitiate the results so as to make them unintelligible and probably misleading.—Yours truly,

LAWSON TAIT, M.D., F.R.C.S., ETC.

49, ST. CHARLES SQUARE, NORTH KENSINGTON, W.

18th May, 1897.

DEAR MR. TRIST,—In reply to your letter of yesterday I write to say that I do not consider morphia to be an anæsthetic at all, and I am quite sure no hospital surgeon would think of using it in the case of an operation on a human patient. If any one should give a different opinion upon this point it must be either through ignorance or from a wish to deceive and mislead.—Believe me, yours truly,

J. H. THORNTON, M.B., B.A., C.B.

(Deputy-Surgeon-General, I.M.S., Retired.)

CONSTITUTIONAL CLUB, LONDON, May 30th, 1897.

DEAR SIR,—In your letter of May 27th, you say that Webster defines an "anæsthetic" as "capable of rendering insensible" but in "Nuttall" I find the definition to be "an agent that deadens sensibility." The degree of "deadening" producible by the agent to make it rank as an "anæsthetic" is not stated. Accepting this vague definition, "Morphia" no doubt is a partial anæsthetic—so also, in a less degree, is Alcohol, so also is Hyoscyamus, and Paraldehyde, and Croton-Chloral, and Sulphonal, and many other drugs used in daily practice. But no "Materia Medica" would describe these drugs as anæsthetics, but as hypnotics and narcotics.

To end what is merely a verbal quibble, let us close our encyclopædias and dictionaries, let us walk into the Operating Theatre. Let us ask one of our vivisection friends to get upon that comfortable-looking narrow high table with the clean white sheet over it and the tray full of spotless shining instruments at its side. Let us strap him down very firmly (afterwards to prevent that annoying muscular spasm and so that he can make no disturbing sound, we intend to give him curara and to open his trachea); let us tell him that we are compelled to dissect out his Carotid Artery, to trephine his skull, to open his chest and to grope about for his Pneumogastric and Sympathetic nerves, and finally that as an "anæsthetic" we intend to give him a morphia injection; and then watch the expression of his face. It would not be easily forgotten. It would throw some light upon his true opinion of morphia as "an anæsthetic."

Reference to any preparation of opium as a general anæsthetic and in the same sense as chloroform, ether, etc., are anæsthetics, would be ridiculed in the Operating Theatre, and to label such preparations "anæsthetics" in the Vivisection Chamber is merely to throw dust in the eyes of the public. I wonder that such a quibble and misrepresentation does not appear to the mind of the average vivisectionist—as worse than cruel—positively ungentlemanly.—Faithfully yours,

STEPHEN TOWNSEND, F.R.C.S.

P.S.—It would be interesting to know what dose of morphia was given and in what way it was anticipated that the result of these experiments would alleviate human suffering.

Sidney G. Trist, Esq.

14, THORNTON AVENUE, STREATHAM, S.W., May 18th, 1897.

MY DEAR SIR,—In my opinion morphia is *not* an efficient substitute for chloroform or ether in those terribly severe experiments carried out by Messrs. Bayliss and Hill. No hospital surgeon would dare to operate on a human being who was simply narcotized by morphia, even though the operation were twenty times less severe than the experiments under discussion. The assertion that animals are treated with the same care as human beings, in order to mitigate their sufferings, will not bear investigation. If the assertion were true, how is it that the old pain-killers, as opium, have entirely given place to chloroform and ether?

Here is the answer.

The dose of morphia must be a *poisonous* one in order that no response be elicited to such stimulation as was applied in Messrs. Bayliss and Hill's experiments. By "response," I mean a return to consciousness.

When a human patient has taken a poisonous dose of opium or morphia, the chief treatment consists in arousing him to consciousness by such a sharp stimulant as flagella-

tion. In the animal, the cutting down to the external jugular vein, the carotid artery, and trephining the skull, would act as much more effectual stimuli in bringing him back to a sense of atrocious suffering.

The effects of morphia are much more marked in man than in the lower animals. I have known twenty grains of the drug fail to kill a large retriever. As it is the object of the experimenter to keep the animal alive, he would not give a poisonous dose, hence it is fair to assume that the cutting procedure would result in restoring consciousness and produce struggling.

The importation of curare into the experiment bears out my reasoning. If the animal remained profoundly narcotized curare would be useless. An attempt is made to explain that insufficiency of curarization results in auto-breathing and a rise of cerebral venous pressure. But with an air-tight cavity, as the chest, cut open, the violent action of the heart due to unwonted atmospheric pressure must so derange the whole circulation, that such a grave assertion seems like playing upon one's credulity.—Yours faithfully,

ABIATHAR WALL, L.R.C.P. (Ed.), M.R.C.S.

OUR CAUSE IN THE PRESS. VIVISECTION AND DOG-STEALERS.

(FROM THE "ECHO," JUNE 29TH.)

SIR,—I send you an interesting little item from the *British Medical Journal* of June 19th. This out-and-out supporter of vivisection writes thus of Sir Astley Cooper:—"He was also an eager vivisector, and thus became indirectly a patron of dog-stealers." Precisely; and when men know that, and still continue vivisectioning, they necessarily become *direct* patrons of dog-stealers. Accepting the connection between the two trades, which the *British Medical Journal* so tersely points out, it does not seem to me that people are to be blamed if they decline to regard the vivisector as an honourable or an honest man. We owe the *British Medical Journal* thanks for calling attention to this matter.—Your obedient servant, W. W.

VIVISECTING DOGS.

(FROM THE "ECHO," JUNE 30TH.)

SIR,—Besides the experiment which Mr. Coleridge mentioned to the Prince, other experiments of Dr. Starling's at the laboratory of Guy's Hospital are detailed in the *Journal of Physiology*. In one, on November 10th, 1893, a dog was vivisected from 9.35 a.m. till 6 p.m. Dr. Starling says it "was completely unconscious during the whole of the experiment"—i.e., for nearly eight hours and a half. Another experiment of his on a dog lasted from October 11th, 1895, to October 14th, when the animal was killed. In this experiment the left thoracic duct, right lymphatic duct, and right innominate vein were ligatured, and solutions injected into peritoneal cavity. Dr. Starling claims that the dog "was free from pain on recovering from anæsthesia, and remained in good condition and perfectly comfortable till he was killed." May I ask some of your scientific readers to give us their opinions on these two points—viz., the possibility of the first dog being so long unconscious, and of the second being free from pain and perfectly comfortable after a vivisection of apparently so severe a character? I should be especially glad to know the opinions of veterinary surgeons on the first point, as it is one on which their experience must be much larger than that of physicians or surgeons.—Yours obediently,

A. L. WOODWARD, Hon. Assist. Sec.

Church Anti-Vivisection League.

158, Lancaster-road, W., June 21.

LABORATORY EMPLOYÉS.

(FROM THE "ECHO," JULY 2ND.)

SIR,—Not the least of the evils of vivisection is the depraving influence it must exert on the lads and laboratory porters who are employed in helping the experiments. It is argued that the pursuit of physiological science exercises such an elevating influence on the researchers and their pupils that

they become ennobled by their dreadful work, and thus escape the degradation that would be necessarily entailed by the practice of purposeless cruelty. But what must be the effect of the daily torture of thousands of animals on the ignorant minds of hewers of wood and drawers of waters, the sweepers, the cleaners up of the ghastly remains of the mangled victims of the experimenter's knife! It cannot be pretended that these sweepers and porters, the persons who bind the victims to the tables, who prepare the instruments and hand the operators their tools are ennobled by scientific pursuits; they know nothing of the high aims of the researchers; they hope to make no discoveries in "cerebral circulation" or "blood pressure." They remove the gory sawdust and swab the blood-spattered floor for a few shillings a week. Are they not being tutored in cruelty, educated for sworn tormentors, and hardened against the cry of anguished creatures, merely for a poor subsistence? For these at least there is no redeeming science, it is nothing but rank, naked cruelty, and such seed can only produce fruit after its kind.—I am, Sir, yours truly,

EDWARD BERDOE, M.R.C.S.

Tynemouth House, Victoria-park-gate, N.E., June 30.

VIVISECTION, CRUEL AND UNNECESSARY.

LETTER ADDRESSED TO THE EDITOR OF THE "LIVERPOOL COURIER."

SIR,—I have read Dr. Wigglesworth's letter with the care and attention due to so able and elaborate a defence of a practice which I believe to be both cruel and useless. In his enthusiastic support of what he evidently conscientiously holds to be of vital importance to the progress of the healing art he has, in my opinion, allowed his love for science to obscure his knowledge of the history of medicine and surgery. Thus he tells us that abdominal surgery is the outcome of animal experimentation. Now nothing can be further from the fact. Professor Lawson Tait, our greatest abdominal surgeon, said in a letter addressed to myself on October 9th, 1889:—"You may take it from me that instead of vivisection having in any way advanced abdominal surgery, it has on the contrary, had a uniform tendency to retard it." English surgeons were until recently much behind Spanish and Italian operators in dealing with wounds of the bowels. In countries like Spain, where the use of the knife as a weapon is so common, injuries to the intestines are much more frequent than with us, and the surgeons of Madrid and other Spanish cities deal with them with great success due to their constant practice. I know another very eminent operative surgeon who has had great experience in this particular branch of surgery, who declares that vivisection has never helped him one bit. No sir, practice on the human subject, and practice alone, has brought abdominal surgery to its present perfection.

The operation for removal of the kidney was not discovered by experimenting on animals, as is often alleged, but was first practised on an Italian who was stabbed in the back, and whose kidney protruded, so that the surgeon was induced to remove it, which operation he successfully performed. I do not say that all these things have not been tried upon animals; what I do say is that these experiments have not been the means of discovery. The question of anæsthetics is really the question of their efficiency and continuance. Unfortunately the use of chloroform, ether, etc., is in many cases contra-indicated as certain to vitiate the success of the experiment. For this reason we constantly see in the reports of the vivisectors that morphia or chloral was employed instead of chloroform. Neither of these drugs is a true anæsthetic, and their use could only avail to save the victim a fraction of its pain. But curare, as is well-known, is the vivisectors' safe-guard. It is employed in almost all the experiments. It is not an anæsthetic at all, but it prevents the animal moving, or in any way disturbing the work of the experimenter. Dr. Wigglesworth's observations about operations before the days of chloroform are strangely at variance with those of Mr. Malcolm Morris, F.R.C.S., in his article in the *Nineteenth Century* for last May; he says, "Of the horrors of operation before the discovery of anæsthetics there are men still living who can speak." He instances Dr. Cotting, who says, "No mortal man can ever describe the agony of the

whole thing from beginning to end, culminating in the operation itself, with its terrifying expressions of infernal suffering." Another doctor, who himself underwent an operation in those days, says, "Suffering so great as I underwent cannot be expressed in words." But all this agony was nothing in comparison with that inflicted on some of the victims of the vivisector's knife. The surgeon's work was done in a very few minutes. I could prove to Dr. Wigglesworth that many awful vivisections last for many hours.—I am, sir, yours etc.,

EDWARD BERDOE, M.R.C.S., etc.

London, 17th June.

SWEATING IN BLOOD POISONING.

To the Editor of the "WOMAN'S SIGNAL."

MADAM,—As regards the sweating bath for the cure of hydrophobia, I am thankful indeed to find that such treatment is coming to the fore, and trust it will soon replace the horrible Pasteur treatment. I quite believe in the efficacy of the sweating bath for also curing tetanus and snake bite. It would be well if testings for these could also be made, but the medical faculty are so obstinately averse in New Zealand to giving effect to any suggestion of the laity, it will long remain untried unless the people themselves undertake the experiment. Several pitiful cases of tetanus have recently occurred—four in the Auckland hospital—all unsuccessfully treated.

An incident occurred many years ago in Fiji, which Dr. Lyth, one of our missionaries, related to me. A woman had received some injury while fishing, and tetanus set in, which defied all drug treatment, and as a last resource a hot bath was tried, with the result that in a few moments the woman shouted out "au sa buta" ("I'm cooked,") and she recovered. In Australia I heard of a cure of snake bite by means of sweating, but accidentally induced. A woman, living far away in the bush, beyond all medical help, was bitten by a snake. Her husband was absent on some business which would detain him for several days. The agonizing thought came to her that her four or five small children would be without food before their father could return. So, in terrible haste, she set about baking a large batch of bread, and making other preparations. Profuse perspiration was the result; the otherwise inevitable drowsiness was kept off, and she noticed that none of the dreaded symptoms appeared. Her mother-love, which had caused such superhuman exertion, had, under God's blessing, saved her.

Pardon my intrusion. The facts may help.—Faithfully yours,

MARY COLLIS.

New Plymouth, New Zealand,
13th April, 1897.

THE PASTEUR INSTITUTE.

To the Editor of "OUR DOGS."

SIR,—You say the figures of the Pasteur Institute, concerning the treatment of patients for hydrophobia, are interesting. No doubt, from the point of view of arithmetical gymnastics they are interesting; but, as scientific statistics, they are, to my mind, perfectly worthless. We are told that 1,308 patients were treated in 1896. What were they treated for? Because they had been licked, scratched, bitten, or scared by a dog, or other animal suspected on some grounds—or none—to be suffering from rabies. In what sense the vast majority of these persons could be termed "patients" puzzles me to think. A "patient" is defined by the dictionaries as "a diseased person under medical treatment." But they do not treat diseased persons; that is to say, people suffering from hydrophobia, at the Pasteur Institute. The inoculations are prophylactic, not curative. The method is declared to be preventive only. Nobody was ever cured at the Pasteur Institute. If you have hydrophobia they will have nothing to do with you. If you are only frightened, or want a cheap trip to Paris, you will be welcomed, and "cured;" that is to say, if you are not killed by the inoculations. I visited the Institute recently, and saw the treatment in practice. I would not submit to it, because nothing can in my opinion be more perilous than the inoculations with diseased animal matter, such as I witnessed. It is obvious to the least logical mind

that statistics based on mere suspicion of disease must be fallacious. Suppose a case of yellow fever to be landed at the docks. I inject ten thousand persons who have been within sight of the case, with, say, distilled water. Nobody dies. I publish a table to show that I have saved ten thousand persons from dying of yellow fever. I might deceive some people, no doubt. It is just on this principle that the hydrophobia statistics of the Pasteur Institute are compiled.—I am, sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

June 2nd, 1897.

DIPHTHERIA AND ANTI-TOXIN.

(From the *Hospital*, June 19th.)

Mr. Lennox Browne writes: My attention has only just been drawn to a review on "Diphtheria and Anti-toxin," published in your issue of May 8th last. In it you say "great stress has been laid by Mr. Lennox Browne on the occurrence of albuminuria as a result of anti-toxin, but Dr. Tirard adds the weight of his own experience to the already large array of counter evidence." In reply to this I would draw your attention to the report on the use of anti-toxic serum in the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board for 1896, wherein it is shown (Table XVI.) that albuminuria occurred in 60 per cent. of the 2,764 cases treated with anti-toxin, as against 40 per cent. on 1,412 cases not so treated (p. 9), the average—before anti-toxin was introduced—of this complication on 1,000 cases, in all of which analysis was made, having been in accord with these figures. I have only to add that, on the face of the report, all other complications and sequelæ are proved to be more frequent in the serum than in the non-serum treated cases, and by no manipulation of figures, or saving clauses, can this fact be gainsaid.

VIVISECTION AND THE ANÆSTHETIC CHEAT.

(From the *Echo*, June 12th.)

SIR,—Your correspondent "J. S." asks if "we anti-vivisectionists are being befooled." No; but the English people at large are! We anti-vivisectionists who read our *Echo* are too well instructed to be misled by the Home Secretary's reply to Mr. MacNeill, but the people of this country who have not studied this highly technical question are certainly befooled, all, from a very exalted personage down to the humblest voter. The trick is easily done. Certificate A is "special for experiments without anæsthetics," and it may be quite true as the Home Secretary said that it is "never allowed except for inoculations and similar trivial operations." The licensee, however, is not to be balked by any such obstacle. He proceeds simply and effectually in the following manner. He desires, let us say, to bore holes in a dog's skull, to tear open the chest, and disclose and experiment upon the heart. He gives a whiff of chloroform, enough to swear by, but not enough to interfere with the results of his research. He next gives a little morphia, which he has lately taken to call an anæsthetic; thus Messrs. Bayliss and Hill, in the *Journal of Physiology* (vol. xviii. p. 357), say:—"Throughout the experiments morphia was the anæsthetic used." Everybody knows that morphia is not an anæsthetic at all, but merely a stupefier (nobody would have a tooth extracted under morphia when he could get nitrous oxide gas). Before the preliminary stupefaction has passed off curare is given, and then no noise, no biting, no scratching, no movements follow; nobody but the experimenter could tell that the creature was not really anæsthetized, and then the vivisector sets to work tearing away bones and muscles, cutting and stimulating nerves, and doing his devilish work without fear of the Home Secretary or anybody else. He can swear he has used "anæsthetics," and as the animal has no power to express any pain, although suffering unutterable and unimaginable torments, his cruel torturer can go on with his work for six hours and twelve minutes (under curare, mind), as was done at the New Museum, Cambridge, as is recorded in detail in the *Journal of Physiology*, vol. xv. pp. 1-89 (1893).

I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, AUGUST 2nd, 1897.

THE VICTORIA STREET AND INTERNATIONAL ANTI-VIVISECTION SOCIETY.

A SPECIAL general meeting of the members of the Society was held at the Westminster Palace Hotel, on Wednesday, July 21st, "to consider and approve, or reject, the new regulations that the Committee have prepared." There were present the Countess of Camperdown, Lord Coleridge, Hon. Stephen Coleridge, Miss S. S. Monro, Ernest Bell, Esq., F. E. Pirkis, Esq., R.N., Miss E. Elcum Rees, Mrs. E. M. James, Miss Goff, P. G. Peabody, Esq. (Boston, U.S.A.), Surgeon-Gen. Thornton, C.B., Rev. J. Stratton, Miss E. Watts Phillips, Rev. Ernest Fischer, Mrs. Charles Mallet, Mrs. G. E. Church, Mrs. Percy Dodson, Miss Wheeler, Miss Mortimore, Miss E. Abney Walker, Canon and Mrs. Wilberforce, Col. and Mrs. Benson, Mrs. Leycester, Miss Janet Smith, Dr. Berdoe, Mrs. A. J. Walter, Robert Hill, Esq., Mrs. Walter Crane, Mrs. McKinnell, Miss Paul, Miss Hayman-Dod.

The following sent letters of regret:—the Dowager Countess of Portsmouth, Miss Rhoda Broughton, Lady Arnold, A. J. Allen, Esq., Howard Williams, Esq., M.A., Mrs. Robie Uniacke, Miss E. F. Evans, W. G. Rushbrooke, Esq., M.A., Miss A. L. Woodward, E. C. V. Lloyd, Esq., Rev. L. Lewis, Mrs. Deane Morgan, Miss Florence Mulley, Miss M. E. Wolfenden, W. H. Dunn, Esq., Mrs. Vivian.

The following resolutions were moved and passed:—

(1) That the new regulations are approved by this Society now here assembled, and that they come into operation on and after the 6th of October, 1897.

(2) That notwithstanding anything contained in clause XVII. the Executive Committee shall be elected at a meeting to be held on October 6th, when these regulations shall come into operation.

ARE WE TILTING AGAINST WINDMILLS?

FIERCER than ever the combat deepens on the question of the employment of anæsthetics in experiments upon animals in English laboratories. This is the Hougomont of our battle, and to this point all our energies must be directed. In the INSPECTOR'S Annual Return, in the

HOME SECRETARY'S reply to Mr. WEIR, in the PRINCE OF WALES'S answer to Mr. COLERIDGE, and Dr. STARLING'S protest from Guy's Hospital, the burden of the tale is "Done under Anæsthetics." Entrenched in this position our opponents defy our assaults. It matters not if they are confronted with their own descriptions of their own experiments in their own journals, in which they explicitly declare that "morphia was the anæsthetic employed." When questioned by superior authority they have the hardihood to protest "Oh, yes, but chloroform was given as well, only we did not think it necessary to mention it." As who should say on being charged on his own confession with keeping his children on bread and water—"Quite true; but I omitted to add that I gave each child a mutton chop every day."

The value of a physiological paper recording a minute research upon living animals depends upon a detailed statement of every step of the experiment being given, and for this reason we are bound to accept the vivisector's word for the various procedures he records. For example, when Messrs. HILL and BARNARD tell us in the *Journal of Physiology* that in certain terrible experiments of theirs in which they opened the chests and abdomens of various animals, "It is absolutely essential that chloroform should not be administered during the periods of observation," we feel quite certain that they did not use chloroform in their researches, because they are writing for their fellow experimenters and students of science. If, on being taxed with breaking the law, they alleged that they really did use chloroform, we should know what the object of their statement was, and estimate it accordingly. When Messrs. HILL and BARNARD go on to explain that "there is no other agent known to us that so rapidly abolishes the mechanisms which compensate for the influence of gravity as chloroform," we see at once why they denied their victims the benefit of the drug; we recognize that its use would have ruined the value of the experiment. We do not charge them with purposeless cruelty, or reckless barbarity; we see that from their point of view they could not have given chloroform. In a private letter addressed to one of our friends a well-known vivisector says, "All painful experiments in this country are performed under anæsthetics. I have never seen or heard of painful experiments being performed during the eight years I have been engaged in physiology in which the animal was not under complete anæsthesia." This is the most amazing statement in connection with our question we have ever read or heard of. Would that we could believe it! But the existence of some thirty laboratories and the fact that one hundred and sixty-six vivisectors, many of whom have told us the story of the unutterable tortures they inflicted either without anæsthetics or with a mere pretence of their use, shriek against our desire to be courteous and compel us to cry from the house-tops that the word of a vivisector is not to be trusted.

Unless the writer of the letter from which we have quoted the abovementioned be blind and deaf he must have seen and read of hundreds of painful experiments that have

been performed in English laboratories. Has he not heard of Dr. STEWART's experiments at Cambridge set out at length in the *Journal of Physiology* (Vol. XV., pp. 1-89) which consisted in opening the chests and abdomens of dogs and rabbits, stimulating the nerves and spinal cord, and doing these horrors in ten cases under curare alone, in seven cases under chloral alone? Has he not read in this paper that Dr. STEWART says, "Voluntary movements were prevented by curare;" and did he not note that the time occupied by these awful vivisections varied from eighteen to a hundred minutes? Will he satisfy himself of the truth of Dr. STEWART's statement that one experiment of this terrible character lasted close upon five hours and was done under curare, "as the animal could not be got properly under morphia"? (p. 86). Does the writer expect us to believe that all classes of experiments which involve pain can be performed under complete and genuine anæsthesia? Can those which are concerned with the reflex action from the sensory nerves be so performed? Or those which are connected with the liver and gall bladder? Or those on the digestion, the heart and circulation, on poisons, and on the artificial induction of disease? Is the writer aware that Professor RUTHERFORD, of Edinburgh, in his *Syllabus of Lectures on Physiology* (part 1, p. 70, 1890) says, "*Chloroform was used during the preliminary operations in two cases [very cruel experiments on the biliary secretion of dogs], but the stimulation of the liver which it induced rendered the experiments worthless?*" On the other hand, we have abundantly proved that the doses of curare administered in the experiments have no influence on the biliary secretion, and do not interfere with the effects of hepatic stimulants. It is therefore an exceedingly valuable auxiliary in a research of this nature." In the *Statement of Professors in Behalf of Science*, published in the *Boston Evening Transcript* (Feb. 25, 1896), we are authoritatively informed that there is a "proportion of cases which may be of great importance, where the results of experiments would be endangered by any means that could be taken against suffering. In these cases the animal must suffer."

No, we are not engaged in a Quixotic adventure. We are fighting for Justice, Mercy, and Truth against Injustice, Cruelty, and Falsehood. Cruelty in high places and falsehood from the lips of persons who are highly placed that they may train our young men. These teachers unhappily make it their business to mislead the public conscience; theirs is a Coward Science, and it is for Cowards to practise wilful deceit.

BACTERIOLOGICAL BOASTINGS.

IN reviewing the annual Report of the Inspector under the Vivisection Act, a month ago, we took exception to the claim put forward as part of the brief for the vivisectioners, that experiments on animals had increased the knowledge of diseases, that is, in a sense beneficial to mankind. The exact words used by Dr. POORE, the Inspector, in his Report, were as follow:—

"Among the diseases a knowledge of which has been

increased by inoculation experiments may be mentioned, tubercle, diphtheria, plague, cholera, smallpox, enteric fever, septicæmia, puerperal fever, anthrax, pleuro-pneumonia, swine fever, glanders, tetanus, silk-worm disease, chicken cholera, cattle-plague, tse-tse fly disease, snake-bite, etc."

This is a very formidable list, and while we do not deny that knowledge of microbes may have been increased, we find plenty of evidence that knowledge how to prevent diseases said to be caused by them, to say nothing of cure, has not. It may be that the voices of experts on this point on our side are few; but from the summary manner in which they are disregarded or put to silence when raised, it is not surprising that so few are raised. We have an instance of this in the case of Dr. CAMPBELL BLACK, whose able letter has been published. For daring to differ with the animal experimentalists he has been deprived of his professorial chair. Nearer home, Dr. LENNOX BROWNE, who made out so strong a case against the use of anti-toxin for diphtheria, has been disregarded; while the question asked by Mr. J. S. HURNDALL, a distinguished veterinary surgeon, a few years back, whether, "after all the cultivations and test experiments" one single practical outcome in prevention, not to mention cure, could be pointed out, remains unanswered—unless it be by Dr. POORE, and we are going to show that he is unreliable.

In regard to any short method of treating tubercle—consumption—the alleged discovery of KOCH has long been given up, Professor BURDON SANDERSON confessing the fact at a meeting on the subject of the Jenner Institute, held some time ago, with the lugubrious remark that "it was a dark day for them when Koch's tuberculin was shown to have failed." It would be a bright day indeed, and we should like to see it dawn on consumptive patients, if physicians could, after a certain stage, give them any hope. But we know they cannot, and therefore it was bad judgment on the part of Dr. POORE to claim that any useful knowledge in relation to tubercle had come out of animal experimentation.

Then with regard to diphtheria, Dr. LENNOX BROWNE, in criticising the *Report of the Metropolitan Asylums Board* in 1896, amply showed that there was a smaller mortality in patients treated without than among those treated with anti-toxin. In addition to this the mortality from diphtheria has been higher ever since anti-toxin was introduced. This is shown by the official figures of the REGISTRAR-GENERAL'S returns, and has been admitted again and again in the medical journals. In the first quarter of last year (1896), the total diphtheria mortality in the United Kingdom was equal to 0·31 per 1,000, which was higher by 0·10 per 1,000, or very nearly one-third, than the average rate in the first quarters of the preceding ten years. In the second quarter the deaths were 0·07 in excess of the average, in a total of 0·24 per 1,000; in the third quarter 0·08 above the average in a total of 0·26 per 1,000; and in the fourth quarter 0·06 in excess of the average on a total mortality of 0·32 per 1,000. Now, surely, if the vivisectioners had obtained knowledge giving them greater power over this disease, the general death-rate ought to have gone down. But in

spite of everything, and to the regret of everybody, we may add, it had gone up throughout the year 1896, though we believe that of late there has been a slight decline.

Dr. POORE's next point is "plague,"—we suppose he means as experienced in India. But could a more miserable fiasco than the exploits of the bacteriologists entrusted with the task of stopping the plague be conceived? The great KOCH was out there, in addition to HAFKINE, the Russian, and YERSIN, the Frenchman. Let us take a single telegram dated June 10th. In this the GOVERNOR of BOMBAY informed the SECRETARY OF STATE that in the Surat district there had been 13 cases, 12 deaths; Thana district, 11 cases, 9 deaths; Ratnagiri district, 2 cases, 2 deaths; Kolaba district, 13 cases, 12 deaths; Kathiawar, 2 cases, 1 death; Cutch, 309 cases, 309 deaths; Baroda, 8 cases, 5 deaths. Of the Cutch cases and deaths 116 are of earlier date, but not previously recorded. Where, we ask, did the power of any new knowledge come in there? Any treatment that does not avert some large proportion of deaths condemns itself, but here as nearly as possible all the cases arising resulted fatally. Still, we do not expect the experimenting scientists in England to admit failure. They never do. Looking abroad, however, we find evidence and to spare of it. There was a German Commission on plague at Bombay, and "The Commissioners state," we learnt from the *Times of India*, June 1st, "that they were unable to express a definite opinion as to the efficacy of the immunisation methods of M. HAFKINE and Dr. YERSIN." Clearly, they did not see any good in them, or they would have said so. An Austrian Medical Commission went out, and its report was much more explicit, being to the effect that, "neither Dr. YERSIN's serum inoculation nor Dr. HAFKINE's preventive lymph had proved successful." The further we go, the more the failure of Dr. POORE's increase of knowledge to benefit anybody is apparent.

The next point is "cholera." When HAFKINE's treatment was tested in its early career on some men of the East Lancashire Regiment at Lucknow, several of the men were attacked, and according to a *Times* telegram "the proportion of fatal cases among them was about the same as among the non-inoculated patients." But it is well known that officers commanding troops in India keep their men free from cholera by compelling them to boil their drinking water; and the question of the prevention of cholera lies in the water supply. Mr. ERNEST HART has said that England having secured good supplies of pure water can "snap her fingers at cholera." We know that this matter is difficult to arrange in India, but it ought to be arranged, and the inoculation of filthy nostrums, avoided on the proofs afforded, as useless.

In regard to "smallpox" we were not aware that its prevention had been contributed to by bacteriology or vivisection. To be told so is, we admit, new knowledge to us. We never heard before that JENNER experimented on animals in the modern sense. What we do know is that "the latter-day science of public health"—by which is meant effective sanitation—has, by the

testimony of the *Medical Press* (December 23rd, 1896, p. 661), "fairly drawn the teeth of that ancient and devastating dragon, smallpox, which now rarely continues to exist anywhere within the four corners of the United Kingdom."

The cause of enteric fever has long been known to lie in water pollution, and if here again the bacterium has been identified the course of the fever has not been shortened. It runs its course as it always did, and the doctors in attendance have to keep the patient alive and wait. The new knowledge here again then (if any), has not been of much benefit to the human race.

In the prevention of septicæmia, puerperal fever, and some other transmissible or infectious maladies, cleanliness has been the great factor. The fact that dirt was a fruitful cause of disease has long been known, and the efforts to overcome it date back to a period far anterior to that at which the theories of the bacteriologist were formulated, and also long prior to the time when it was seen to be a good thing to displace the old Inspector of Nuisances with the higher salaried Medical Officer of Health.

The greater number of the other diseases enumerated by Inspector POORE are those of cattle, and in hardly one of them is anything settled by the new knowledge. Several of them relate to the alleged discoveries of PASTEUR—such as anthrax, silkworm disease, chicken cholera—not one of which is established beyond controversy, even in the ranks of the members of the scientific school themselves. Dr. POORE adds, amongst others, "cattle plague," and if by that he means rinderpest, all the world has seen how helpless the so-called scientists have been in presence of it. The new knowledge gained in respect of it has rather been at what a terrible rate cattle may die in the presence of all efforts to save them.

While all the time consumed and suffering involved in the works of the bacteriologist in the pursuit of knowledge are being wasted, the hospitals for incurables, of which there are many in London, are filling. If difficult cases are met with in practice it seems as if the medical profession soon came to the end of their knowledge and abandoned them to their fate. There is no prolonged study apparently as to any means which might restore incurables to the ranks of the healthy. That kind of thing is not fashionable, while the pursuit of an empty and fruitless science is; but there can be no question that it would be much more creditable, as well as useful, were more men to devote themselves to unlocking the clinical mysteries connected with the sick, and few or none to cling to the pursuit of a knowledge which gives back no requital and almost uniformly ends in failure and often in disaster.

ERRATUM.—In the July *Zoophilist*, page 50, line 42, after "the words of" insert "Dr. Carpenter concerning;" line 43, delete "Dr. Carpenter," and insert after "experimenter" "he"; line 44, delete "he." The sentence should run thus, corrected:—"The words of Dr. Carpenter concerning the experimenter, Schiff, the notorious Florentine experimenter, he said, "had inoculated," etc.

OUR CAUSE IN PARLIAMENT.

LICENCES UNDER THE CRUELTY TO ANIMALS ACT, 1876.

In the House of Commons, on the 8th of July, Mr. JOHN ELLIS (Nottingham, Rushcliffe) asked the Secretary for the Home Department whether the figures of experiments on living animals contained in Return No. 239 of this Session were obtained from the licensees who performed them, and in that case whether any steps were taken to verify their accuracy; whether each of the "licensed places" was inspected during the year to which the return related, and how many of them more than once; whether any of the visits of inspection were surprise visits, and, if so, how many; and whether he had personally satisfied himself that the licences and certificates were all issued only to such places and persons and with such objects as were contemplated by the Cruelty to Animals' Act, 1876?

Mr. COLLINGS, Under Secretary for the Home Department, replied—Yes, the returns are obtained from the licensees, and the check, of course, upon them is supplied by the visits of the inspectors, which, with a few exceptions, are paid without notice. Four registered places at which no licences were in force, and the laboratory attached to the Board of Agriculture, which was only registered on the 1st of December, were unvisited during the year. Five places were visited once only, eight twice, twenty-five three times, two four times, three five times, and one six times. No licensee was found during any of these visits to be exceeding his powers. The answer to the last paragraph of the question is in the affirmative.

A FRUITLESS OFFICIAL DENIAL.

In the House of Commons, on the 18th of July, Mr. WEIR (Ross and Cromarty) asked the Secretary of State for the Home Department whether he had yet been able to institute the promised inquiry into the allegations made by Dr. E. Berdoo in regard to the use of curare in the practice of vivisection; and, if so, would he state the result of his inquiry?

Sir W. M. RIDLEY (Home Secretary)—Yes, I have made full inquiry into the allegations contained in the letter and statement which the hon. member forwarded to me, and find that they are absolutely baseless. The experiments referred to were performed on animals under full chloroform anæsthesia; the morphia, to which alone allusion was made in the published account of the experiments, being used in addition Curare was used, but not as an anæsthetic.

In reference to this answer, the following explanatory letter was addressed to the London daily journals:—

TO THE EDITOR.

SIR,—May I be permitted to point out why it is impossible for unprejudiced persons to accept the assurance made by the Home Secretary last night in reply to Mr. Weir in the matter of the torturing of animals at physiological laboratories?

Dr. Berdoo quotes from the published works of Messrs. Bayliss, Hill, and Gulland, the following perfectly definite words:—

"Methods of research—the animals employed for this research were in all cases dogs. Throughout the experiments morphia was the anæsthetic used."

These words can mean nothing but what they do mean, viz., that morphia and not anything else was the anæsthetic used.

Dr. Berdoo proceeds very properly to show that the experiments so performed entailed atrocious suffering. The Home Secretary therefore finds himself called upon to reconcile the Government report, which says no cruelties ever take place, with these vivisectionists' own publications.

The vivisectionists, therefore, forthwith set to work to amend their published record so as to make it fit in with the Government report.

But we maintain that this emendation of their original statement of fact made only to meet a definite charge cannot for a moment be accepted by anybody whose sense of fairness in controversy is not totally suspended.

There can be no doubt that the dogs were, as Messrs.

Bayliss, Hill, and Gulland themselves have described, tortured under morphia; and Dr. Berdoo deserves the thanks of all humane people in drawing public attention to what was done. —Your obedient servant,

STEPHEN COLERIDGE, Hon. Sec.
20, Victoria Street, London, S.W., July 14, 1897.

THE USE OF CURARE: MORE SECRECY.

In the House of Commons on Friday evening, July 18th, the following questions were put and answered as stated:—

Mr. WEIR: I beg to ask the Secretary of State for the Home Department (1) Having regard to the allegations made by Dr. E. Berdoo relative to the use of curare in the practice of vivisection, and to the statement of the Home Office that the experiments referred to were performed under anæsthetics, and that curare, though used, was used when the animals could not suffer pain, will he state what anæsthetics were so used; (2) Is he aware that it has been held on the highest authority (Professor Claude Bernard), that an animal stupefied with morphia is still conscious to suffering, and that an animal under the influence of curare becomes absolutely paralysed, but is still sensible to pain, though unable to show it by sound or struggle; and (3) Will he state whether, in the experiments to which he refers, dogs were the animals experimented upon?

Sir MATTHEW WHITE RIDLEY: I informed the hon. Member, in my reply to his question on Tuesday, that chloroform was the anæsthetic used. The answer to the second paragraph of the question is in the negative; and to the third in the affirmative.

Mr. WEIR: I beg to ask the Secretary of State for the Home Department if he will state the number of experiments in which curare was used in the practice of vivisection during last year, and the number of licensees by whom that drug was used; and, will he state the names of the licensed places where curare was used in the practice of vivisection during the year?

Sir MATTHEW WHITE RIDLEY: I cannot see that the returns for which the hon. Member asks would serve any good purpose, and I do not propose, therefore, to call for them. Curare is prohibited by law from being used as an anæsthetic, and I am satisfied that it is not so used.

On the 20th of July, Mr. WEIR further questioned the Home Secretary on the use of curare in vivisections, as follows:—

Mr. WEIR: I beg to ask the Secretary of State for the Home Department, seeing that an animal subjected to a true anæsthetic such as chloroform is insensible to pain, will he state whether there is any reason why the use of curare in the practice of vivisection should not be forbidden, especially in view of the fact that an animal under the influence of curare has been held by the highest authority, Professor Claude Bernard, to be acutely sensible to pain, notwithstanding the fact that it is so paralysed by the drug as to be unable to express its pain by sound or struggle?

Sir MATTHEW WHITE RIDLEY: As I have already stated, I am satisfied that curare is not used as an anæsthetic. There are cases, however, in which its use, along with the anæsthetic, is indispensable for the success of the investigation; but its use does not make the anæsthetised animal sensible to pain.

THE MORAVIAN MISSION BOARD DECLARES AGAINST VIVISECTION.

Towards the end of June it was announced that the members of the Moravian Mission Board had passed a resolution expressing deep regret at the great increase of the practice of vivisection in the medical schools of Europe and America, and strictly prohibited the teaching and practice of vivisection in any hospital, college, or other medical institution connected with their missions.

The Rev. D. P. Morris, of Southsea, writing in the *Echo* of July 9th, commented on the above-quoted statement as follows:

"The *English Churchman* of yesterday, July 1st, contains an account of a movement, on the part of the Moravian Board of Missions, in order to free themselves and their medical missionaries from complicity with the deadly cruelty and impiety of vivisection. So far this is well, and we thank the

Most High for it. The Moravian Missions have long been distinguished for their self-denying devotion to the spread of the Gospel among the heathen. In taking this recent official step they have set an example to other missionary societies. We call upon them, in the name of the God of righteousness and of mercy, to rise to the emergency and to do likewise. Will the L.M.S., the C.M.S., the Methodist M.S. refuse to add their weight and influence in the warfare against vivisection in the face of the throne of the Most High, and of His living, breathing, sentient creation? It is a moral and religious question of the highest and deepest import. A noble profession is being degraded and corrupted; our hospitals are being endangered; the mind, and heart, and conscience of the nation are being insulted. The deep foundations of virtue and morality are assailed, and it is openly declared that all possible wickedness may be excused on the flimsiest pretext of what false scientists choose to describe as pursuit of knowledge."

CORRESPONDENCE.

THE QUEEN'S REIGN AND THE CONDITION OF ANIMALS.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—In the *Illustrated London News* of June 26th there is an allegory from the pen of Sir Walter Besant, written to exemplify the improvement that has taken place during Her Majesty's long reign, in the condition of women, children, the sick, and the helpless.

In reading this I felt that it was incomplete—no mention is made of the "lower animals," as they are generally called, without some of whom our boasted civilization could not exist.

The reason for this omission may possibly be that had they been mentioned the picture would have had to be reversed.

Those of Her Majesty's subjects who have lived through Her reign have seen the systematic torture of animals not only legalized, but promoted. They have seen disgraceful scares raised about rabies and hydrophobia with the ulterior object of destroying that regard and affection for dogs which train up opponents to this practice of torture, and they have looked in vain for legislation which would include in Martin's Act, 1822, so-called wild animals, such as the captive lion or bear in the menagerie, and the bagged rabbit or fox.

We can only hope that Her Majesty may live to see a different spirit, and a different state of things, and that the country may realize its responsibility for the retention of these dark blots on the page of its history.—Yours truly,

ELLEN JOSEPHINE PHILIPS.

JUNE 28th, 1897.

INSULTING A MEDICAL MAN.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—The York branch of the Victoria Street Society recently held its annual meeting, and the committee had invited the Rev. T. Perkins and the writer of this letter to be the speakers for the occasion. Mr. Oliver Pickering, who has been working with Miss Backhouse in our cause at York, sent an invitation to attend the annual meeting to, among others, Dr. Henry Oglesby. That gentleman was quite indignant, and wrote to the secretary to say, "In answer to your invitation to attend the annual meeting of your Society, I can only say that I consider the invitation an insult," etc., etc. There is another side, however, to this matter. The meeting was presided over by the well-known medical gentleman, Dr. Chalmers, of York, who made not even an apologetic speech for being present, but who gave the principle of anti-vivisection his unqualified support. He ridiculed the idea of "the profession to give us health by these inoculations," and said that "no doubt soon we should have one produced to save us from the dangers of cycle accident in the street, or from slipping upon orange peel." Thus it happens one doctor is really insulted by being invited to attend a meeting where he could oppose if he chose the error he might hear uttered; the other bravely speaks out his mind against cruelty and error, even though his medical brethren have not his independence of thought and

action. We owe a debt of gratitude to every anti-vivisection doctor.—Yours, &c.,

July 5th, 1897.

T. A. WILLIAMS.

PROPHYLACTIC INOCULATIONS.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Mr. Joseph Collinson, of the Humanitarian League, writes in several of your contemporaries on the futility of Pasteur's vaccines and the widespread system of inoculation based upon the so-called science of bacteriology.

To an independent observer the claims of the promoters of the inoculation system of medication certainly appear eminently unsatisfactory even from a selfish point of view and apart from any consideration of the fact that they are based upon vivisection. The evidence and opinions of experts upon serum-therapeutics are most conflicting, while the facts known to the public—from Pasteur's long list of over 350 deaths after treatment for hydrophobia, to Dr. Koch's recent failures in the treatment of rinderpest—are entirely damaging to it.

Those members of the medical faculty who defend treatment by inoculation, while enthusiastic in its praises, and flamboyant in their descriptions and nomenclature of the wonderful microbes or disease germs which are daily being discovered by bacteriologists, if questioned a little more closely for definite information, invariably take refuge in the assertion that they have not had any direct or practical experience in that department, which is a branch of itself such as can only be efficiently investigated by experts who devote all their time and attention to it.

Thus is the mind of the trusting public beguiled with the unpronounceable names of mysterious and indescribable entities of disease which during the short period of their existence are represented as undergoing a cycle of metamorphoses which must defy the individualizing powers of the most illuminate bacteriologist to recognize or describe. At one stage it is simply rudimentary—a spheroidal bacillus, at another, rod-like, at another, a comma bacillus, and so forth.

When Dr. Wheeler, of Chicago, announced his discovery of the microbe of death, it was thought that the climax in these amusing announcements had been reached, as it was perceived that without this lethal bacillus the presence of all its minor congeners was unimportant, and with it superfluous. No such consummation had, however, been attained by the microbes, which have still continued to evolve, and multiply, and metamorphise *ad infinitum*.—I am Sir, yours truly,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

THE "CHRISTIAN" AND VIVISECTION.

Our contemporary, *The Christian*, in its issue of June 24th published the following letter:—

HOSPITAL VIVISECTION.

DEAR SIR,—I should not have troubled you with any remarks with respect to the Prince of Wales's speech at Guy's Hospital if it were not for the recommendation to your readers to endorse the view put into the mouth of His Royal Highness as to the care taken by vivisectionists to prevent suffering in the animals experimented on.

It is true that the Prince says he has made "careful inquiries," which, of course, we must respectfully accept. But of whom were those inquiries made? Admittedly of the authorities of the hospital in which he spoke, even of some of the gentlemen connected with the medical school of that otherwise benevolent institution. As well question Shylock about usury as ask a man holding licences to "dispense with anæsthetics," or to kill the animal when he has done torturing him, whether the ways of the vivisectionist are honourable and straightforward, and several of such I find to be on the staff of the said medical school. When the moral degradation of society is in question, it is not right to be half-hearted in dealing with such men.

It is only necessary to refer to a very recent Parliamentary Return dated June 1, 1897, in order to see the hollowness of the representations which they are accustomed to put forward.

Amongst those who have aroused public indignation has been Dr. Klein (an official publicly employed by Government in making experiments on animals), because he plainly stated that he "had no regard at all to the sufferings of the animals." Was he, therefore, worse than the rest? By no means. The worst of all are those who pretend that animals have been efficiently anaesthetised, even when they know that the experiment itself would be vitiated and inconclusive if chloroform or ether was employed.

I forbear to send details of a shocking experiment recently performed in the medical school of Guy's Hospital, and published in *The Journal of Physiology*. But I will say that it amounted to the most dreadful torture; and that the report in that journal says not a word about anaesthetisation. If men take out, year after year, lacerations to dispense with anaesthetics, and then publish cases without alluding to any means of annulling pain, I can only conclude that they are guilty of cruelty, and are condemned out of their own mouths.—Yours faithfully,

EDWD. HAUGHTON, M.D.

Upper Norwood, S.E.

The Editor of the *Christian* in a note in the same issue, commented on the subject in the following outspoken manner:—

"We are in entire accord with Dr. Haughton in his letter on Vivisection. We have frequently expressed our conviction that the notion that our dumb animals must be tortured with Satanic cruelty in order to benefit mankind, is a slander on God, a libel on their and our faithful Creator. Indeed, this contention is given up by vivisectioners themselves, as witness the following":—

'IS VIVISECTION MAINLY FOR THE BENEFIT OF HUMANITY?'

'After the furtherance of science that [the benefit of humanity] is the object we have in view.'—PROF. VICTOR HORSLEY (*English*).

'If the positive utility to man of every experiment is to be maintained as a justification for its continuance, the practice must evidently stop! If its justification rests upon anything, it rests upon the broader conception—that investigation for its own sake is a worthy end.'—*The Boston Medical and Surgical Journal*, April 25th, 1895 (*American*).

'The advancement of our knowledge, and not utility to medicine, is the true and straightforward object of all vivisection. No true vivisectioner in his researches thinks of the practical utilization. Science can afford to despise this justification with which vivisection has been defended in England.'—PROF. LUDWIG HERMANN, in "*The Vivisection Question explained to the General Public*," Leipzig, 1877 (*German*).

"A national hospital, of which the medical and surgical staff shall be thorough opponents of Vivisection, is proposed. Information may be obtained from Miss A. L. Woodward, Hon. Sec. of the Society for United Prayer for the Prevention of Cruelty to Animals, 158, Lancaster Road, London, W."

STOLEN BACILLI-INFECTED RABBITS AT LARGE IN PARIS.

The Paris correspondent of the *Daily Telegraph*, sent to that journal on the 26th ult., the following alarming intelligence:—

"Another terror has been added to life in Paris. Last week a warning was raised against crayfish owing to cases of poisoning in several families after *écrevisses* had been eaten. Now there is a more fearful prospect in view, for fifty rabbits inoculated with the virus of cholera, typhus, anthrax, croup, and lockjaw have been stolen from the chemical laboratory of the temporary hospital of Aubervilliers. This place was constructed near the fortifications at a cholera period, and suspected cases were removed out there from the centre of Paris. The thieves are supposed to have taken forty or fifty rabbits, and the alarm was raised yesterday morning by one of the hospital attendants. The Prefecture of Police was immediately communicated with, and orders were at once issued for the strict supervision of all rabbits offered for sale in the central markets and elsewhere. Detectives were likewise despatched all over Paris in search of the thieves. The doctors attached to the Cholera Hospital and other establishments of the kind have hastened to assure the public that the rabbits can be eaten cooked without danger, but this is only a second-rate sort of consolation for possible purchasers of animals filled, as it were, to the brim with the most terrible maladies."

HOME INTELLIGENCE.

READING.

ADDRESSES BY THE REV. J. STRATTON.

On Thursday, June 17th, a meeting of the Reading and District Anti-Vivisection Society was held in the Greyfriars' School-room, when an address on vivisection was given by the Rev. J. Stratton, of Wokingham. The Rev. A. H. Cunliffe was in the chair, and amongst those present were Miss L. H. Tilbury, and Messrs. R. Jackman, F. W. Paxman, R. Carter, G. Ashdown, and I. B. Nicholson.

The CHAIRMAN, after referring to the impetus given to the society in Reading by the visit of Mr. T. A. Williams, said that, although the society had only recently begun their work, they now numbered between eighty and a hundred members. There were, he said, three attitudes people took with regard to this question. There were those who were decidedly in favour of vivisection, who wanted it retained, and said it was a necessity. Then there were those, who, like themselves, were strongly opposed to it. Thirdly, there was the great majority who were quite ignorant about the matter, and who had never had their attention called to it. These had not made up their minds which to join, because they heard statements for both sides, and did not know the real facts of the case. The Chairman concluded by advising those present to do what they could by laying the true facts of the case before people.

The Rev. J. STRATTON gave a review of the whole question. This year there were 236 vivisectioners throughout the country, although it was supposed to be "restrained" by the Act of Parliament. The Act of Parliament had made matters worse. The certificates were obtained in this manner. Someone wanted to perform experiments, which would not allow of anaesthetics, and so they got a certificate to enable them to carry out their wishes. Then some wanted to inoculate animals with disease and keep them alive for a long time, during which the vivisectioner could watch the disease introduced into the animals. This could be done under a certificate, on the vivisectioner giving the animal a little chloroform on the prick of the needle. In fact, Lord Coleridge said in a commentary on the law as it stood at present—"Thus we see that the holders of certificates may by law inflict upon animals the severest cruelties which the mind of man can conceive by experiment." During this year 7,500 experiments had taken place in this country. Of these, 969 were with anaesthetics, 184 for illustrated lectures with anaesthetics, and 5,297 under certificate A, which dispensed with anaesthetics altogether. Then 1,050 animals were operated upon under certificate B, which pledged the operator to give a little anaesthetic at the beginning of the experiment, and then he might keep the animal in pain as long as it might suit his pleasure. Mr. Stratton then quoted the words of an eminent vivisectioner, Dr. Burdon Sanderson, who said—"No inspection will give any guarantee whatever as to what happened when the inspector was not present." Mr. Stratton concluded his address with an appeal to the moral sense.

Mr. CARTER moved—"That this meeting protests very strongly against the practice of vivisection as cruel and morally unjustifiable and useless, and pledges itself to use its utmost powers to obtain its legal prohibition."

This was seconded by Mr. Paxman, and carried.

The meeting then terminated.

On Sunday, July 11th, the Rev. J. Stratton, of Wokingham, gave three anti-vivisection addresses in Reading. That in the afternoon was at Castle Street Congregational Church. After referring to the certificates obtainable for the practice of vivisection and the necessarily limited and unsatisfactory supervision of the inspectors, Mr. Stratton dealt with the prevailing misconception that the victims of the practice were rendered insensible to pain by the use of anaesthetics, and pointed out the various classes of cases where anaesthetic treatment would defeat the object of the experiment. He concluded with an appeal to Christian people to be in earnest in the matter, and so to form a body of public opinion which would be too strong for the continuance of the horrible and degrading practice, and it was evident in this that he carried the audience with him in thorough sympathy.—On the same day, Mr. Stratton addressed audiences morning and evening at another chapel, affording full information on the subject of vivisection and giving his hearers much food for reflection.

On Sunday, July 18th, the Rev. Joseph Stratton delivered addresses at the Cross Street Hall, Reading, both morning and evening, on "The Christian duty to the brute creation." The morning discourse had reference to the general principle of the "rights" of the animals, and Mr. Stratton impressed his hearers with the fact that the lower creation had rights by virtue of their creation. God had included them in His economy—in His great scheme. They had their part to play in the world—each his own use. Necessarily, therefore, they had "rights." But man alone had responsibility, and that implied a duty to protect the rights not only of his fellow-man but of all God's creatures. To fail in that duty was to imperil to some extent his own character—to cast a blot upon his soul. Then as sin begets sin, the cruelty practised upon the dumb animals must also find vent in cruelty towards wife, child, or fellow-man.—In the evening the terrible disclosures from the vivisection chambers were graphically described, the audience being most strongly impressed.

THE SCOTTISH SOCIETY.

GLASGOW.

On Sunday afternoon, June 27th, Colonel Waterston lectured in Blockairn Free Church, Glasgow, when there was a congregation of about 500, who eagerly accepted literature on the subject at the close of the service.

EDINBURGH.

On Sunday evening, July 4th, Colonel Waterston lectured in the Mission Hall of the Arthur Street United Presbyterian Church, Pleasance, Edinburgh.

MEETING AT ANSTRUTHER.

On Sunday afternoon, July 18th, Colonel Waterston lectured in the Chalmers Memorial Free Church, Anstruther, to a good attendance. At all the meetings a considerable distribution of papers on the anti-vivisection movement was made.

FOREIGN INTELLIGENCE.

GERMANY.

We are requested to correct a slight geographical error which crept into a paragraph of our German news in the June issue, and to say that the S.P.C.A. referred to is at Freiburg-in-Baden.

The *Thier-und-Menschenfreund* states that a medical congress was to have been, and probably was, held at Berlin at Whitsuntide, the programme being published beforehand in all the papers. Among other things it was announced that there would be a special "demonstration meeting," at which cases of rare occurrence, and particular experiments or scientific preparations might be brought forward. Apparently, as a special attraction, mention was made that at this meeting Professor Ewald, of Strasburg, would exhibit animals both before and after they had undergone operations on the fore-brain (*cerebrum*). Many thought that this disgraceful exhibition might have been prevented by the police; but it appears that so long as only medical men were admitted, under pretext, we suppose, of the advancement of science, and the general public excluded, nothing could be done. And nothing can be done in such cases in Germany while the law, as at present, continues to support that which every right-minded person most strongly condemns.

AMERICA.

THE ANTI-VIVISECTION BILL IN THE UNITED STATES SENATE.

Senator Gallinger has reported the Bill to regulate vivisection in the district of Columbia (an area of twelve miles round Washington). He accompanies the Bill with a very full report which discusses the subject for and against the Bill from the evidence presented to the committee. He appends a most impressive list of names of some of the most influential people in the country who favour and urge the passage of the

Bill. It is very plain, said *The Lancet* correspondent on July 2nd, that the efforts of the vivisectionists to defeat the Bill have attracted unusual attention to this measure, thus arousing a large opposition from very prominent persons who evidently do not clearly understand the situation, but whose expressed wish and great numbers have influenced the Senate Committee. The Bill provides: (1) for the use of anæsthetics in all painful experiments on living vertebrate animals, the so-called inoculation experiments, test of drugs and medicines and cases of recovery from surgical procedure being expressly exempted from this requirement; (2) for the licensing of all experimenters by the district commissioners, except those who are duly authorised officers of the Government of the United States or of that of the district of Columbia; (3) for the prohibition of vivisection in the public schools and in exhibitions for the general public; and (4) for the inspection of all places of experiment by inspectors to be appointed by the President of the United States.

On the 9th of June a memorial from the Medical Society of the District of Columbia, protesting against the passage of the Bill, was presented in the Senate by Senator Cockrell. The memorial was signed by Drs. W. W. Johnston, W. C. Woodward, G. L. Magruder, C. H. H. Kleinschmidt, G. Wythe Cooke, S. C. Busey, Z. T. Sowers, and J. S. McLain. The closing paragraph of the memorial sets forth that general laws are amply sufficient to suppress any abuses that may arise in the exercise of this liberty on the part of the medical profession.

The supporters of vivisection, it appears, could not carry out their opposition to the Bill without calling names, and the latest invention used in an address presented from the Medical Congress against the Bill seems to have been the epithet "Zoophilous women" applied to our American lady friends who supported the Bill.

FIFTH ANNUAL MEETING OF THE ILLINOIS ANTI-VIVISECTION SOCIETY.

The fifth annual meeting of the Illinois Anti-vivisection Society was held on the afternoon of June 4th, in the rooms of the Aurora W.C.T.U., on Broadway, with a full attendance. The president being absent from the city, the chair was occupied by the vice president, Mrs. Inez K. Sutphen. After the reading of the minutes of the last meeting the secretary's report was presented, as follows:—

Our cause has steadily advanced since the organization of the Illinois Society in 1892. Then there were about sixty-five societies in operation in both countries; now there are ninety-three. We commenced with a membership of ten; we have become national and international, and have now 366 members; local membership, 31, mostly with dues paid in advance. The national petition for the total abolition of vivisection has 20,633 signatures, including 558 medical men and 232 clergymen. At the suggestion of the Illinois Society an international committee was appointed and is now in working order in London under the title of the International Provisional Council of A. V. Delegates. The four American societies are duly represented, our delegate being Mr. Sidney Sarel, of London, recommended to us by the Hon. Secretary of the Church A. V. League. We receive a report of each meeting from Mr. Sarel, and he duly presents to the council whatever suggestions we may have to offer. Still advancing, a World's A.V. League is now in process of organization in London, and in Germany another great organization is under way embracing nearly all the continental countries. We receive frequent letters informing us of their progress, and inviting our co-operation. The work of the Illinois Society has been conducted largely through the post office, receiving letters and sending out literature, both in bulk and to lists of addresses furnished from all quarters by friends of the cause, including 130 vice-presidents, who have been appointed such on account of faithful and active service. Our printing office was established in August, 1893, and has continued in active operation printing the monthly magazine and other literature required. The past year there have been published tracts and leaflets as follows:—2-page leaflets, 22,500; 4-page tracts, 16,000; 8 page tracts, 18,250; total, 56,750. The services of our non-resident vice-presidents have been invaluable in advancing the work. They now number 130, and represent nearly all the states from Maine to Southern California, and from Washington to Florida. They distribute literature, secure signatures to the petition for the total abolition of vivisection, subscriptions to the magazine, and funds for the Society. State and district superintendents of the W.C.T.U. in Washington, Idaho, Iowa, Indiana, New York, Tennessee, Arkansas, and other

sections, are promoting the cause in local meetings and annual conventions.

The Treasurer's report showed a balance of \$13 in hand. The election of officers resulted as follows:—President, Mrs. Inez K. Sutphen; Vice-presidents, Mrs. Chauncey Miller, Mrs. Mary E. Evans, and Mrs. Emily A. McCarty; Secretary and Treasurer, Mrs. Fairchild Allen; Assistant Secretary, Miss Josephine Thompson; Auditor of Accounts, Miss Helen Graham; Executive Committee, Mrs. I. K. Sutphen, Mrs. Clara E. Beede, Mrs. R. B. Potter, Mrs. Chauncey Miller, Mrs. M. A. Ralph, and Mrs. Fairchild Allen. A Board of Managers was also appointed.

SOUTH AFRICA.

KOCH AND THE RINDERPEST.

This rinderpest plague is making greater progress than the scientists and veterinary experts are making against it, and whilst Dr. Koch and Surgeons Edington and Hutcheson are endeavouring to prove their several theories the cattle die by thousands, and the transport of goods by bullock-cart is seriously affected. A significant fact is that the Cape Government have given up hopes of coping with the disease. They have withdrawn the Cape Mounted Police from the borders, where they have been on rinderpest duty, and sent them to Bechuanaland. The pest has broken out at Nqamakwe, and all waggons are stopped at the Kei Bridge, the main road of ingress from the Transkei, the largest native territory in the colony. The boom in wire-fencing has gone down, for the germs have been carried across by birds of prey, who disgorge the tainted flesh, thereby spreading disease on the grass on which healthy oxen feed. Inoculation has proved futile, and it is feared that the disease will run its course to the coast-line. Many cases of black gall have been mistaken for rinderpest inside the border, and the owners of herds and the veterinary surgeons—whose decisions are final—are consequently on bad terms with each other.

INDIA.

(FROM A BOMBAY CORRESPONDENT.)

The pamphlet recently issued by the Indian Anti-Vivisection Society, Bombay, "Pasteurism, its Moral and Religious Aspects," has proved efficacious as a means of conversion, and has induced many religious men to join the Anti-Vivisection Movement. Many native papers heartily support the opposition to the proposed Pasteur Institute, but the Anglo-Indian press abuse the Anti-Vivisectionists most consistently. Many anti-Pasteur meetings have been held, and others are being arranged, including one of the Arya Samajists. The Bombay Society contemplate presenting an enormous petition to the Government, but will be somewhat hampered in so doing by the lack of sufficient funds. They have an uphill fight, as the Government officials are largely opposed to them; but they rely on being supported by British sympathisers at home.

"OPENING UP THE POSSIBILITY OF DEVISING NEW AND HOPEFUL METHODS."

The following letter, signed "A. Goff," appeared in the *Echo*, on the 22nd of July, and is very important: "Allow me space for a most interesting extract from a lecture on the bacillus of yellow fever, recently delivered by Professor Sanarelli, Director of the Institute of Experimental Hygiene at Montevideo. After mention of experiments on various animals, the Professor continues:—'My experiments on man amount to five. . . . In two individuals I have experimented on the effect of subcutaneous injections; in the other three the effect of endovenous injections. These few, but very successful experiments, have been sufficient to illuminate with a truly unforeseen light all the pathogenic mechanism until now so obscure and badly interpreted. The injection of the filtered cultures in relatively small doses reproduced in man typical

yellow fever, accompanied by all its imposing anatomical and symptomatological retinue. The fever, congestions, hæmorrhages, vomiting, nephritis, delirium, collapse—in short, all that complex of symptomatic and anatomical elements, which in their combination constitute the indivisible basis of the diagnosis of yellow fever. This fact is not only striking evidence in favour of the specific nature of the bacillus icteroides, but it places the etiological and pathogenic conception of yellow fever on an altogether new basis.'

"This is, of course, deeply interesting; how important it is one may judge from the remarks of the *British Medical Journal*, that 'there can be no doubt that Professor Sanarelli's persevering ingenious researches have given the study of yellow fever an impetus it sadly wanted, and that they have opened up the possibility of devising new and hopeful methods of treatment.' No wonder, also, that the *Lancet's* correspondent in Rome records his 'admiration for the thoroughness, the patience, and the courage with which the young Siennese physician has broken ground in a difficult and dangerous field.'

"There are three points which this account of an interesting research leaves doubtful, and which I regret the brilliant young Professor should have overlooked. They are, of course, only details, still, they are of interest; namely:—Who were these five men? What did they think of it? Did they recover, or did they die?"

RETURN OF LECTURES AND MEETINGS.

The following is a further return of the lectures and meetings, arranged at the instance of the Victoria Street and International Society, which have taken place as stated below:—

DATE.	SPEAKERS.	PLACE OF MEETING.
1897.		
May 23	Mr. A. Westcott	Isle of Dogs
" 23	" "	Regent's Park
" 24	" "	Hyde Park
" 28	" "	Mile End
" 28	Mr. R. S. Wood	Isle of Dogs
" 29	Mr. A. Westcott	
" 23	Mr. T. A. Williams	Reading
" to 29	Mr. A. Westcott	Radical Club, Bethnal Green
" 30	" "	Regent's Park
" 31	" "	Town Hall, Chelsea
June 1	" "	Hyde Park
" 3	" "	
" 5	" "	
" 8	" "	
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" 15		
" 18	Rev. J. Stratton	Reading

THE WORLD'S LEAGUE AGAINST VIVISECTION.

This League is now fully established, and members, and in some cases whole societies, have joined it from Germany (Prussia, Saxony and Württemberg), Austria, Hungary, Italy, Switzerland, Holland, Russia, Scandinavia, America and England. The Württemberg branch has issued the following appeal:—"After long and careful deliberation it was resolved at the Buda-Pesth Congress of S.P.C.A., by 177 votes against 17:—"That vivisection should be totally prohibited, and its practice punishable by law." In accordance with the spirit of this resolution a 'World's League against Vivisection' has been founded of which the rules are published. (These rules are to be obtained in English, together with other information concerning the League, from the Hon. Secretary of the English Branch, Miss Woodward, 158, Lancaster Road, London, W.) We call upon all who are minded like ourselves, upon all members of societies for the protection of animals, that is, who are true to their principles and their humanity, to support this League, either by forming a branch of it in their own country, or by joining such branch should it already exist; and furthermore to do their utmost to induce those of their acquaintance to join also, so that in each and every land we may approach the governing bodies, in numbers and importance equal to the greatness and justness of our cause. All other matters concerning the work of the League must be left for deliberation and decision at the first Assembly of the whole League when fully constituted. We take this opportunity to request the circulation for signature of a petition similar in character to our own, and its presentation to the government of the land to which the signatories belong. The presentation of such petitions in all lands would in itself, in a manner, form a standing protest of the whole civilized world against the crime of vivisection. Printed matter, leaflets, etc., referring to this subject may be obtained from Herr W. Liebernickel, 18 Cranach Strasse, Dresden. Signed for the Council of the Württemberg Branch of the World's League against Vivisection, by E. BEGER, President, and FR. HUMMELL, Secretary.—Cannstadt-Stuttgart, July 20th, 1897."

The petition referred to above commences as follows:—"The movement against the scientific torture (vivisection) of animals, which is now spreading throughout all civilized lands, has had the effect in some countries of placing legal restrictions on its practice, and in others of administrative regulations being issued with the intent also of confining this method of advancing science within certain limits. Although the objective of this movement has not been attained yet the more the facts become known and understood, the more decided is the demand which comes from all classes of the community that vivisection shall and must be totally prohibited." The petition then repeats the various objections to vivisection so familiar to our readers, and concludes with these words:—"For all these reasons we are opposed to the protection or tolerance of vivisection by the State, and we earnestly beg that in clear and unmistakable language, free from vain promises, not liable to alteration later, or rendered ineffectual and impracticable by supplementary clauses, vivisection shall be strictly forbidden and declared punishable by law."

ANÆSTHETICS IN VIVISECTION.

Dr. Berdœ having exposed the fact that severe experiments were recorded by Messrs. Hill and Bayliss in the *Journal of Physiology*, as having been done by them while the animals were under the influence of morphia only, Mr. Hill wrote in the *St. James's Gazette* that he used chloroform also. The following effective reply from Dr. Berdœ was published in the same paper on the 23rd of July:—

Sir,—The controversial methods of some physiologists, like the practices of a famous experimenter from the Flowery Land, are "peculiar." Professor Leonard Hill, in his paper in the *Journal of Physiology*, vol. xviii., p. 334 *et seq.*, written in conjunction with Mr. W. Bayliss, says distinctly, "Throughout the experiments morphia was the anæsthetic used" (p. 337). If by "throughout"—which Webster's Dictionary defines as "Quite through; in every part of; from one extremity to the other of"—Mr. Hill only means, as I gather from his letter in your columns, a portion of the time of the experiment, then his use

of the word is as peculiar as were the ways of Ah Sin. The ace which Mr. Hill produces from his sleeve in the shape of chloroform anæsthesia could never have been suspected by anybody not in the confidence of experimental physiologists. The experiments in question were concerned with the cerebral circulation—a class of experiments which Dr. George Hoggan, a witness before the Royal Commission of 1875, said cannot be performed under complete and genuine anæsthesia.

That there are many experiments involving atrocious suffering which cannot be so performed is well known. For example, Professor Rutherford, of Edinburgh, in his *Syllabus of Lectures on Physiology*, Part I., p. 70, says:—

"Chloroform was used during the preliminary operation in two cases; but the stimulation of the liver which it induced rendered the experiment worthless."

But we have testimony still more conclusive against Professor Hill—that of Professor Hill himself, who in a recent number of the *Journal of Physiology* says, in a paper on "Gravity and the Circulation" (vol. xxi., p. 323):—

"It is absolutely essential that chloroform should not be administered during the periods of observation, for there is no other agent known to us that so rapidly abolishes the mechanisms which compensate for the influence of gravity as chloroform."

Messrs. Hill and Bonnard, the writers of this paper, do say that chloroform and ether were employed "during all operative procedures" (that is to say while the chest and belly of the animal were laid open); but they tell us that morphia was the drug used "during the periods of recording observations;" and they add that morphia "has the advantage of acting as an emetic on dogs," so that what little stupefying effect the drug may have on the victim is lessened considerably by the vomiting produced. If Mr. Hill's victims were perfectly anæsthetized by chloroform, and further narcotized by morphia, during the whole time of the experiments referred to by Mr. Coleridge, what was the object of using the curare so frequently mentioned in his paper? I maintain there are many classes of experiments, involving cruel suffering, in which true anæsthesia is impracticable. I believe that the experiments in question belong to one of these classes; and I believe Mr. Hill when he says, "Throughout the experiments morphia was the anæsthetic used."—I am Sir, your obedient servant, EDWARD BERDŒ, M.R.C.S., etc.

We are glad to find in "The Old Testament and Modern Life," by Mr. Stopford A. Brooke, so strong a testimony against cruelty to animals as appears in his chapter on David, the Shepherd. Here are some of the sentiments expressed: "I look upon any injury done to man's natural or developed tenderness to animals as an injury done to the whole State, as a degradation to humanity, as a grave wrong to morals, and a worse wrong to the ideal of gentleness and courtesy which is at the root of so much of national honour. . . . The pains inflicted on the kindly races who labour for us, and who would love us well, are pitiable; and they lower, when they prevail in a people, the whole spiritual temper of the nation. . . . How much of that want of mercy and gentleness to men comes out of our careless cruelty to animals I do not know, but as long as we make sport out of the misery of wild creatures, and as long as the torture of animals is excused for the sake of knowledge, and the art of healing men is made to rest on the deliberately administered agony of creatures whose weaknesses we are bound in honour to protect, it is no wonder that pitifulness and sensitiveness to suffering and to justice are so lessened that we have no real care for the hideous pains which society, for the sake of its own luxury, comfort, and amusement, permits, without thought, to be inflicted on the poor. There is nothing in the whole range of things needful for the greatness or the culture of a nation more necessary than the habit of pity, than the daily practice of it; and everything which enfeebles that habit not only separates the nation from sweetness and light, but is a vital danger to the life of the State. Much has been done of late with regard to animals, but the more we have done, the more vividly ought we to see the enormous evil which still remains; the more we ought to contend against all cruelty to animals from whatever quarter it comes, and whatever excuses are made for it, from the side of our amusements, our sport, our luxury, or our science."

The Victoria Street and International Anti-Vivisection Society.

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SPECIAL SUPPLEMENT

TO THE

ZOO PHILIST.

LONDON, AUGUST 2, 1897.

VIVISECTORS AT THE HOSPITALS.

MANY of our friends who are desirous of contributing to the relief of human suffering having frequently inquired as to whether any and which of the Hospitals have Vivisectors connected with them, we have compiled from "The Medical Directory, 1897," and the Official Returns for 1896, the following

LIST OF HOSPITALS, ASYLUMS, ETC.,

HAVING LICENSED VIVISECTORS AT WORK IN THEIR SCHOOLS, OR INCLUDED IN THEIR MEDICAL STAFF:—

LONDON.

Name of Hospital.	Name of Vivisector.	Years in which a License (if any) was held.
ALEXANDRA HOSPITAL FOR CHILDREN WITH HIP DISEASE, 18, Queen Square, Bloomsbury, W.C.	BOWLBY, ANTHONY ALFRED, F.R.C.S.	1887.
BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.	CAUTLEY, EDMUND, M.D. COLLINS, ED. TREACHER, F.R.C.S. STODDART, W. H. B., M.B., B.S. WARING, H. J., B.Sc., M.B. ROBINSON, G. H. D., M.D., B.S.	1892-3-4-5-6. 1892. 1896. 1889-90-1-2-3-4-5-6. 1895-6.
BRITISH LYING-IN HOSPITAL, Endell Street, Long Acre, W.C.		
CANCER HOSPITAL, Brompton, S.W.	JESSETT, FREDERICK B., F.R.C.S. COTTERELL, ED., F.R.C.S., L.R.C.P. PLIMMER, H. G., M.R.C.S. MACLEHOSE, NORMAN M., M.B. CLARKE, ERNEST, M.D. ARKLE, CHARLES J., M.D.	1891-2-3. 1891-2-3-4. 1894-5-6. 1894-5-6. 1896. 1893-4-5-6.
CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.	PEMBRY, M. S., M.A., M.B., B.Ch. MOTT, F. W., M.R.C.S., &c. HUNTER, WM., M.D.	1893-4-5-6. 1883-4-6-7-9-90-1-2-3-4-5-6. 1891-2-5-6.
CHARING CROSS HOSPITAL, W.C.	BRUNTON, THOMAS LAUDEB, M.D., F.R.C.S. CHEYNE, WILLIAM WATSON, M.B., F.R.C.S. JESSOP, W. H. H. F.R.C.S., &c. RINGER, SYDNEY, M.D. HERRINGHAM, W. P., M.D. LACK, H. L., M.D.	1878-9-80-1-2-3-4-5-6-7-8-91-4. 1880-1-2-3-4-5-6-7-8-91-2-3-4-5-6. 1885-6-7-8-9. 1878-9-84-5. 1896. 1894-5.
CHILDREN'S HOSPITAL, Paddington Green, W. ..	HARRIS, VINCENT DORMER, M.D. HERON, GEORGE ALLAN, M.D. BEEVOR, SIR H. R., M.R.C.S. CHAPLIN, T. H. ARNOLD, M.B., M.R.C.P.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6. 1891-2-3. 1891-2-3-4. 1892-3-4
CITY OF LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Victoria Park, E.		
DENTAL HOSPITAL OF LONDON, Leicester Square, W.	BUXTON, DUDLEY WILMOT, M.D., B.S. ..	1891-2-3-4-5-6.
EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.	WILLIAMS, DAWSON, M.R.C.S., &c. HAYWARD, J. A., M.D. CHAPLIN, T. H. ARNOLD, M.B. FLETCHER, H. M., M.A., M.D.	1882-3-4-5-6. 1894-5-6. 1892-3-4. 1892-3-4-5-6.

Name of Hospital.	Name of Vivisector.	Years in which a License (if any) was held.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.	EVE, F. S., F.R.C.S., &c. FENWICK, WM. SOLTAU, M.D., B.Sc. TUBBY, ALF. H., M.B.	1885-6-7-8-9-90-1-2. 1892-3-4-5-6. 1889-90-1-2-3-4-5-6.
GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.	LOCKWOOD, C. B., F.R.C.S.	1890-1-2-3-4-5.
GUY'S HOSPITAL, St. Thomas's Street, Borough, S.E.	REMPF, LEONARD, M.A., M.D. DURHAM, H. E., M.B. PAKES, W. C. C., L.R.C.P. GOLDING-BIRD, CUTHBERT HILTON, M.B. PYE-SMITH, PHILIP HY., M.D. STEVENSON, THOMAS, M.D., F.R.C.S. WHITE, WILLIAM HALE, M.D., &c. WASHBOURN, JOHN W., M.D. STARLING, E. H., M.B. LANE, WILLIAM ARBUTHNOT, F.R.C.S. PAVY, FREDK. WM., M.D. FAWCETT, JOHN, M.D.	1894. 1896. 1896. 1881-4-5-6-7-8-9-90. 1878-9-90-1-2-3-4. 1881-2-3-5-6-7-8-9-90-1-2-3-4-5-6. 1887-8-9-90-1-2-3-4-5-6. 1889-90-1-2-3-4-5-6. 1890-1-2-3-4-5-6. 1891-2-3. 1892-3-4-5-6. 1893-4-5-6.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.	ACLAND, THEO. DYKE, M.D. HABERSHON, S. H., M.D. PERKINS, JOSEPH JOHN, B.A., M.B. WETHERED, F. J., M.D. MARTIN, S. H. C., M.D.	1891-2-3-4-5-6. 1892-3-6. 1896. 1892. 1887-8-9-90-1-2-3-4-5-6.
HOSPITAL FOR DISEASES OF THE SKIN, Blackfriars	TIMS, HY. WM. MARETT, M.D.	1892-3-4-5.
HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.	ABRAHAM, PHINEAS, M.D., B.Sc.	1879-80-91-2-3.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C., and Cromwell House, Highgate, N.	LACK, H. L., M.D.	1894-5.
HOSPITAL FOR EPILEPSY AND PARALYSIS, Portland Terrace, Regent's Park, N.W.	BALLANCE, CHAS. A., M.B. LANE, WILLIAM ARBUTHNOT, F.R.C.S. TURNER, WM. ALDREN, M.D.	1886-7-8-9-90-2-3-4-5-6. 1891-2-3. 1891-2-3-4-5-6.
ITALIAN HOSPITAL, 41, Queen Square, W.C. . .	FAYRER, SIR J.	1878.
KING'S COLLEGE HOSPITAL, Portugal Street, Lincoln's Inn	BEEVOR, SIR H., Bart., M.R.C.S. CHEYNE, WILLIAM WATSON, M.B., F.R.C.S. FERRIER, DAVID, M.D., F.R.S. CROOKSHANK, E. M., M.D., &c. (King's College) CHEATLE, GEO. L., F.R.C.S. HALLIBURTON, WM. D., M.D. TURNER, WM. ALDREN, M.D. LAWSON, KENNETH, M.R.C.S. SMITH, W. R., M.D., D.Sc.	1891-2-3-4. 1880-1-2-3-4-5-6-7-8-91-2-3-4-5-6. 1882-3-9-90-1-2-3-4-5-6. 1887-8-9-91-3. 1892-3-4-5-6. 1887-8-9-90-1-2-3-4-5-6. 1891-2-3-4-5-6. 1894-5-6. 1895-6.
LOCK HOSPITAL, Female, and Asylum, Westbourne Green, Paddington	COTTERELL, EDWARD, F.R.C.S., L.R.C.P.	1891-2-3-4.
" " Male, 91, Dean Street, Soho, W.	COTTERELL, EDWARD, F.R.C.S., L.R.C.P.	1891-2-3-4.
LONDON FEVER HOSPITAL, Liverpool Road, N. . .	WASHBOURN, JOHN W., M.D., &c. HUNTER, WILLIAM, M.D.	1889-90-1-2-3-4-5-6. 1891-2-5-6.
LONDON HOSPITAL, Mile End, E.	EVE, FREDERIC S., F.R.C.S., &c. DEAN, HY. PERCY, B.Sc., F.R.C.S. HILL, LEONARD E., M.B. FENWICK, W. S., M.D. BARNARD, H. L., M.B., B.S.	1885-6-7-8-9-90-1-2. 1888-9-90-1-2-3-4-5-6. 1891-2-3-4-6. 1894-5-6. 1896.
METROPOLITAN DISPENSARY, 9, Fore Street, Cripple-gate, E.C.	HARRIS, VINCENT DORMER, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6.
METROPOLITAN HOSPITAL, Kingsland Road, N.E. . .	POWER, D'ARCY, M.B., &c. TOOTH, HOWARD HY., M.D. HAIG, A., M.D. FURNIVAL, PERCY, F.R.C.S. WARING, HOLBURN JACOB, B.Sc., M.B. PAGET, STEPHEN, M.A., F.R.C.S. RUSSELL, J. S. R., M.D. CAUTLEY, E., M.D. BAILEY, R. C., M.B. WETHERED, FRANK JOSEPH, M.D.	1892-3-4-5-6. 1891-2-3. 1891-2-3-4. 1896. 1891-2-3-5-6. 1892. 1894-5-6. 1892-3-4-5-6. 1891-2-3-4-5-6. 1892.
MIDDLESEX HOSPITAL, Berners Street, W. . . .	LOW, HAROLD, M.B. CLARKE, ERNEST, M.D.	1894-5. 1896.
NATIONAL DENTAL HOSPITAL, W.	BALLANCE, C. A., M.B.	1886-7-8-9-90-2-3-4-5-6.
NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho Square, W. . . .	FERRIER, DAVID, M.D., &c. HORSLEY, VICTOR A. H., F.R.C.S.	1882-3-9-90-1-2-3-4-5-6. 1881-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Street, W.C.	TOOTH, HOWARD HY., M.D. BUXTON, DUDLEY WILMOT, M.D., B.S. RUSSELL, J. RISIEN, M.D. STEWART, J. J., M.A., M.B. TUBBY, ALF. H., M.B., F.R.C.S.	1891-2-3. 1891-2-3-4-5-6. 1894-5-6. 1896. 1889-90-1-2-3-4-5-6.

Name of Hospital.	Name of Vivisector.	Years in which a License (if any) was held.
NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead	SQUIRE, J. EDWARD, M.D. CHEYNE, WM. WATSON, M.B., F.R.C.S. ..	1892-3-4. 1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6. 1888-9-90-1-2-3-4-5-6.
NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.	DEAN, HY. PERCY, F.R.C.S.	1892-3-4-5-6. 1889-90-1.
NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.	CLARKE, J. J., M.B. SIBLEY, W. K., B.A., &c.	1892-3-4-5-6. 1889-90-1.
PADDINGTON GREEN CHILDREN'S HOSPITAL, W. (See Children's Hospital.)		
PIMLICO ROAD FREE DISPENSARY, 20, Pimlico Road, S.W.	RINGER, SYDNEY, M.D.	1878-9-84-5.
QUEEN'S JUBILEE HOSPITAL, Earl's Court	BOKENHAM, T. J., M.R.C.S.	1891-2-3-4-5.
ROYAL EYE HOSPITAL, St. George's Circus, Southwark, S.E.	EYRE, J. W. H., M.D.	1896.
ROYAL FREE HOSPITAL, Gray's Inn Road, W.C. ..	ANDREWES, FREDK. W., M.R.C.S.	1892-3-4-5-6.
ROYAL GENERAL DISPENSARY, 25 and 26, Bartholomew Close, E.C.	JESSETT, FRED. B., F.R.C.S., &c.	1891-2-3.
ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.	HAIG, A., M.D.	1891-2-3-4.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.	CALVERT, JAMES, B.A., M.D.	1892-3-5-6.
ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.	BATTEN, RAYNER DERRY, M.D. BOKENHAM, THOS. JESSOPP, M.R.C.S. COLLINS, ED. TREACHER, F.R.C.S. MARSHALL, C. DEVEREUX, F.R.C.S. MACLEHOSE, NORMAN M., M.B. RUSSELL, ALF. E., M.B.	1887-8-9-90-1-2-3-5-6. 1891-2-3-4-5-6. 1892. 1892-3-4-5-6. 1894-5-6. 1896.
ST. BARTHOLOMEW'S HOSPITAL, West Smithfield, E.C.	BRUNTON, THOMAS LAUDER, M.D., F.R.C.S. .. JESSOP, W. H. H., F.R.C.S., &c. KLEIN, EDWARD EMANUEL, M.D. BOWLBY, ANTHONY ALFRED, F.R.C.S. SHORE, T. W., M.D. LOCKWOOD, C. B., F.R.C.S. BAILEY, ROBT. COZENS, M.R.C.S. WARING, H. J., B.Sc., M.B. JONES, HENRY LEWIS, M.D. CALVERT, JAMES, B.A., M.D. ANDREWES, FREDK. W., M.R.C.S. FLETCHER, HERBERT M., M.A., M.B. TOOTH, HOWARD HY., M.D. EDKINS, J. SYDNEY, M.A., M.B. KANTHACK, A. A., M.B. HORTON-SMITH, PERCIVAL, M.D. DRYSDALE, J. H., M.B. HERRINGHAM, W. P., M.B. FURNIVAL, PERCY, F.R.C.S. FOULERTON, A. G. R., F.R.C.S. ROBINSON, G. H. D., M.D., B.S. REMFRY, LEONARD, M.A., M.D. SLATER, CHARLES, M.B. WELLS, SYDNEY RUSSELL, M.D. SQUIRE, J. EDWARD, M.D. BUXTON, DUDLEY WILMOT, M.D., B.S. LUFF, ARTHUR PEARSON, M.D., B.Sc. F.C.S. .. PLIMMER, HENRY GEORGE, M.R.C.S., F.L.S. .. WALLER, AUGUSTUS, M.D. SYMES, WILLIAM L., M.R.C.S. CLARKE, J. JACKSON, M.B. F.R.C.S. ELLIOTT, A., M.D. RUSSELL, J. S. R., M.D. EDMUNDS, WALTER, M.A., M.D. (Res. Med. Officer)	1878-9-80-1-2-3-4-5-6-7-8-91-3-4. 1885-6-7-8-9. 1884-5-6-7-8-9-90-1-2-3-4-5-6. 1887. 1888-9-90-1. 1890-1-2-3-4-5. 1891-2-3-4-5-6. 1891-2-3-5-6. 1891-2. 1892-3-5-6. 1892-3-4-5-6. 1892-3-4-5-6. 1891-2-3. 1894-5-6. 1894-5-6. 1896. 1896. 1896. 1895-6. 1896. 1896. 1894. 1894-5-6. 1896. 1892-3-4. 1891-2-3-4-5-6. 1893-4-5-6. 1894-5-6. 1884-5-95-6. 1891-2-4-5-6. 1892-3-4-5-6. 1894-5. 1894-5-6. 1891-2-3-4-6. 1886-7-8-9-90-2-3-4-5-6. 1891-2-3-4-5-6. 1891-2-3-4-5-6. 1894-5. 1895. 1896.
ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Golden Square, W.		
ST. GEORGE'S HOSPITAL, Hyde Park Corner, S.W.		
ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.		
ST. MARY'S HOSPITAL, Cambridge Place, Paddington Green, W.		
ST. PANCRAS DISPENSARY		
ST. SAVIOUR'S HOSPITAL		
ST. THOMAS'S HOME, St. Thomas's Hospital ..		
ST. THOMAS'S HOSPITAL, Albert Embankment, Westminster Bridge, S.E.	BALLANCE, C. A., M.B., &c. BRODIE, THOS. GRIGOR, M.D. ACLAND, THEODORE DYKE, M.D. LOW, HAROLD, M.B. SHATTOCK, SAML. G., F.R.C.S. RUSSELL, ALF. E., M.B.	1891-2-3-4-5-6. 1881-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6. 1887-8-9-90-1-2-3-4-5-6. 1878-9-84-5. 1891-2-3-4-5-6. 1890-1-2-3-4-5-6.
UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.	BRADFORD, J. ROSE, M.D. HORSLEY, VICTOR A. H., F.R.C.S., &c. MARTIN, S. H. C., M.D. RINGER, SYDNEY, M.D. BUXTON, DUDLEY WILMOT, M.D., B.S. BAYLISS WILLIAM M., B.A., B.Sc.	1891-2-3-4-5-6. 1881-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6. 1887-8-9-90-1-2-3-4-5-6. 1878-9-84-5. 1891-2-3-4-5-6. 1890-1-2-3-4-5-6.

Name of Hospital.	Name of Vivisector.	Years in which a License (if any) was held.
UNIVERSITY COLLEGE HOSPITAL— <i>continued.</i>	HARLEY, VAUGHAN, M.D... ..	1893-4-5-6.
	SCHAEFER, E. A., M.R.C.S.	1878-9-80-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6.
	CURTIS, HENRY J., M.D., B.S.	1895-6.
VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea, S.W.	POWER, D'ARCY, M.B., &c.	1892-3-4-5-6.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck Street, W.	COTTERELL, EDWARD, F.R.C.S., L.R.C.P. ..	1891-2-3-4.
WEST LONDON HOSPITAL, Hammersmith Road, W.	PAGET, STEPHEN, M.A., F.R.C.S.	1892.
	CHEATLE, GEO. L., F.R.C.S.	1892-3-4-5-6.
	TURNER, WM. ALDREN, M.D.	1891-2-3-4-5-6.
	HUNTER, WM., M.D.	1891-2-5-6.
	ROBINSON, G. H. D., M.D., B.S.	1896.
	ABRAHAM, PHINEAS, M.D., B.Sc.	1879-80-91-2-3.
WESTERN OPHTHALMIC HOSPITAL, 153 and 155, Marylebone Road, N.W.	BATTEN, RAYNER DERRY, M.D.	1887-8-9-90-1-2-3-5-6.
WESTMINSTER HOSPITAL, S.W.	MURRELL, WM., M.D., &c.	1878.
	SPENCER, W. G., F.R.C.S.	1888-9-90-1-2-3-4-5-6.
	TIMS, H. W. MARETT, M.D.	1892-3-4-5.
	COPEMAN, S. M., M.A., M.D.	1891-2-3-4-5-6.
	BLAXALL, F. R., M.D.	1894-6.
	TUBBY, ALF. H., M.D.	1889-90-1-2-3-4-5-6.
	GOSAGE, ALFRED MILNE, M.B.	1896.
THE PROVINCES.		
BIRKENHEAD—		
WIRRAL HOSPITAL FOR SICK CHILDREN	VACHER, FRANCIS, F.R.C.S., &c.	1878.
BOURNEMOUTH—		
NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST	ACLAND, THEO. DYKE, M.D.	1891-2-3-4-5-6.
BRISTOL—		
ROYAL INFIRMARY	EDGEWORTH, FRANCIS HENBY, M.B., B.A. ..	1892-3.
CAMBRIDGE—		
ADDENBROOKE'S HOSPITAL	GRIFFITHS, JOSEPH, M.D... ..	1894-5-6.
	JONES, ERNEST L., M.B.	1896.
EASTBOURNE—		
ST. SAVIOUR'S HOSPITAL	WETHERED F. J., M.D.	1892.
ERITH—		
ERITH, CRAYFORD, AND BELVEDERE COTTAGE HOSPITAL	JESSETT, F. B., F.R.C.S., &c.	1891-2-3.
GREENWICH—		
MILLER HOSPITAL AND ROYAL KENT DISPENSARY	CLARKE, ERNEST, M.D.	1896.
LEEDS—		
GENERAL INFIRMARY	TREVELYAN, EDMOND F., M.D.	1894-5.
PUBLIC DISPENSARY	TREVELYAN, EDMOND F., M.D.	1894-5.
LEICESTER—		
INFIRMARY AND FEVER HOUSE	BOND, CHAS. JOHN, F.R.C.S.	1890.
LIVERPOOL—		
ROYAL INFIRMARY AND LOCK HOSPITAL	PAUL, FRANK T., F.R.C.S.	1891-2-3-4-5.
	ROBERTS, H. LESLIE, M.B.	1892-3-4-5-6.
	THOMAS, W. THELWELL, F.R.C.S.	1896.
	ABRAM, J. H., M.D.	1896.
DENTAL HOSPITAL	PAUL, FRANK T., F.R.C.S.	1891-2-3-4-5.
NORTHERN HOSPITAL	HARRISON, DAMER, F.R.C.S.	1893-4-5.
	HOME, GEORGE, M.B.	1894.
ROYAL SOUTHERN HOSPITAL	MACALISTER, C. J., M.D.	1896.
LADIES' CHARITY AND LYING-IN HOSPITAL ..	WALLACE, A. J., M.D.	1896.
STANLEY HOSPITAL	MACALISTER, C. J., M.D.	1896.
MANCHESTER—		
ANCOATS HOSPITAL AND ARDWICK AND ANCOATS DISPENSARY	BISHOP, EDWD. STANMORE, F.R.C.S., &c. ..	1885-6.
COUNTY ASYLUM, PRESTWICH	SYMMERS, W. ST. CLAIR, M.B., C.M.	1896.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Hardman Street, Deansgate ..	HARRIS, THOMAS, M.D.	1887-93-4-5-6.
EAR INSTITUTE	MILLIGAN, WM., M.D.	1894-5-6.
	MILLIGAN, WM., M.D.	1894-5-6.

Name of Hospital.	Name of Vivisector.	Years in which a License (if any) was held.
MANCHESTER—continued.		
ROYAL INFIRMARY AND DISPENSARY	DRESCHFELD, JULIUS, F.R.C.P... ..	1884-6-7-8-9-90.
	HARRIS, THOMAS, M.D.	1887-93-4-5-6.
MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES	WILD, ROBT. BRIGGS, M.D.	1896.
NEWCASTLE-ON-TYNE—		
DISPENSARY	OLIVER, THOS., M.D., &c... ..	1885-6-8-9-90-1-2-3-4-5-6.
ROYAL INFIRMARY	OLIVER, THOS., M.D., &c... ..	1885-6-8-9-90-1-2-3-4-5-6.
	MURRAY, GEO. R., M.A., M.D.	1892-3-4-5-6.
FLEMING MEMORIAL HOSPITAL FOR DISEASES OF CHILDREN	MURRAY, GEO. R., M.B.	1892-3-4-5-6.
NORWICH—		
NORFOLK AND NORWICH HOSPITAL.. ..	BALLANCE, HAMILTON A., F.R.C.S.	1896.
NOTTINGHAM—		
NOTTINGHAM AND MIDLAND EYE INFIRMARY ..	TRUMAN, E. B., M.D.	1882-3-4-5-6-7-8-9-90-1-2.
SAMARITAN HOSPITAL FOR WOMEN, Raleigh Street	TRUMAN, E. B., M.D.	1882-3-4-5-6-7-8-9-90-1-2.
OXFORD—		
RADCLIFFE INFIRMARY	BROOKS, W. T., M.R.C.S., &c.	1884.
SALFORD—		
ROYAL HOSPITAL AND DISPENSARY	MANN, J. D., M.D., &c.	1888.
SHEFFIELD—		
JESSOP HOSPITAL FOR WOMEN	HIME, T. WHITESIDE, M.D., &c.	1886-7.
VENTNOR—		
ROYAL NATIONAL HOSPITAL FOR CONSUMPTION ..	HARRIS, VINCENT DORMER, M.D.	1880-1-2-3-4-5-6-7-8-9-90-1-2-3-4-5-6.
WAKEFIELD—		
WEST RIDING ASYLUM	LEWIS, WM. BEVAN, M.R.C.S.	1891-2.
WOODFORD (Essex)—		
LONDON Co. ASYLUM (Claybury)	COOPER, CHAS. DUDLEY, M.R.C.S. (Assistant Medical Officer)	1893.
	MOTT, F. W., M.D.	1883-4-6-7-9-90-1-2-3-4-5-6.
SCOTLAND.		
ABERDEEN—		
GENERAL DISPENSARY	FINDLAY, WM., M.B., C.M.	1896.
HOSPITAL FOR SICK CHILDREN	DEAN, GEORGE, M.B.	1896.
	DRYSDALE, J. H., M.B.	1896.
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VOL. XVII. No. 5.]

LONDON, SEPTEMBER 1, 1897.

[POST FREE, 3½d.]

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in *"The Times,"* November 8th, 1892.

NOTES AND NOTICES.

IN the House of Commons on July 13th, Mr. Goschen presented a petition from attendants at a meeting of the Pioneer Anti-Vivisection Society, held at the Lecture Hall, No. 115, Ebury Street, London, S.W., on the 27th May, 1897, Helen Bouchier in the chair, praying for the total prohibition of vivisection.

WE are greatly pleased to learn that on the 18th of last month the Manchester City Council, by a unanimous vote, conferred the freedom of the City on Mr. Herbert Philips, who modestly fills the rôle of a leading local philanthropist of the most generous order. Mr. Philips, who is cordially and ably seconded by his wife, has long been a strenuous supporter of the Anti-Vivisection Cause and of the Branch Society in Manchester. For twenty-three years he has done what he could to help these forward. We sincerely congratulate him on the distinguished honour conferred upon him as a Manchester citizen, and may mention in this connection that portraits of Mr. and Mrs. Philips appeared in the August issue of the *Animals' Friend*.

WHERE is the "New medicine"? and where are its

prophets, the Bacteriologists? Where is the notorious Dr. Klein, for instance, who yearly receives sums of public money for experimental investigations of disease? If he be making holiday, he had better, if his science be of any benefit—which we more than doubt—come back and endeavour to elucidate the cause of the high death-rate from diarrhœa. It was announced by the Press, on the 19th of last month, that—

"In the Metropolis the mortality from diarrhœa among young children was about three times the average, and was higher than it had been in any week for the past twenty-one years."

NOR is London alone in its misfortune in regard to this malady. At Birmingham the gross death-rate about the middle of August rose, for one week, to the extraordinary total of 43 per 1,000—and it was stated, as to that city also, that "the mortality from diarrhœa among children had been exceptionally heavy." For the sake of comparison we may mention that the gross mortality in London for the same week as is above referred to was no more than 26·2, though that included the excessive mortality from diarrhœa. For seven years past Dr. Klein has been investigating the etiology of diphtheria, but—with anti-toxin thrown in—that disease has gone on increasing its victims; so that on the whole we do not think he need interrupt his holiday, if he be taking one. His investigations and experimentations are quite fruitless.

OUR readers will be glad to know that the *Indian Lancet*, the organ of the Medical Association of India, reprints from time to time articles from the *Zoophilist*, and publishes letters against bacteriological experimentation and the cruelties of vivisection written by our medical and other friends and helpers. What is scientific in India should be so here, yet such articles as these would not be published in English medical papers, proving that it is *esprit de corps* and not truth which governs the organs of medical opinion in this country.

WE draw the attention of our readers to an article which we reprint on another page from the *Christian Commonwealth*. This is a trenchant editorial on a chapter in support of vivisection in a book of which the Right Rev. Monsignor John S. Vaughan is the author. Our contemporary characterizes the tone of the chapter as "cold-blooded," and seems to us to justify the epithet.

THE Marriage Service begins with "Dearly Beloved," and ends with "amazement." Cynics have said this is suggestive. The book of Monsignor John S. Vaughan, which is called "Thoughts for all Times," commences

with an unctuous dissertation on "Infinite Love," and closes with an apology for vivisection. This, too, is suggestive. It shows that the tender mercies of some theologians are cruel and indicates how little connection there often is between the strictest orthodoxy and true humanity. A Spanish preacher once delivered a sermon to a crowd of victims of the Inquisition about to be delivered to the flames, from the text, "Though I give my body to be burned and have not charity, it profiteth me nothing." This was hardly more nauseating than Monsignor Vaughan's ecstasies concerning heavenly love while defending vivisection, and ridiculing those who oppose it.

To write about "Languishing for Love" on the threshold of the physiological laboratory, and talk of pain as "Nature's cry for the restoration of order," while denying that vivisection is cruel, because not wilful and malicious, savours of offering to God that which costs the preacher nothing. To quote Solomon's song and discourse of Infinite Beauty whilst defending in the next breath the ghastly horrors of the Torture Chambers of Science, may be mawkish sentimentality, but it is not the religion of the higher humanity. If the practical relations of our daily life are ignored, while our preachers "languish for love," it is hardly to be wondered at that the pulpit is losing its influence in some quarters. No one who reads Mgr. Vaughan's chapter, entitled "Vertiges of the Blessed Trinity in Irrational Creatures," would believe he could write so heartlessly of medical research on living creatures, and conclude a volume, which contains many beautiful thoughts and much religious sentiment, with so cold-blooded a defence of scientific cruelty.

"THE real advance of practical medicine is not determined solely by the position it takes among the sciences, or by the success which attends its therapeutic efforts, but by the elevation of its moral and social character, and to this real advance all may, in their proper sphere, contribute. There is scarce any imaginable limit to the influence for good which our profession may exert." These are the sentiments of the late Sir J. Russel Reynolds, President of the College of Physicians of London, and we are heartily in accord with them. Our great aim is the liberation of the medical profession from its unhappy bondage to a tyrannical science master. It is impossible that the horrors of the physiological laboratory can elevate the moral character which, as Dr. Reynolds, is the true path of medical advance.

DR. MCWALTER read a paper at the British Pharmaceutical Conference, at Glasgow, on Animal Extracts as used in medicine, in which he declared that Professor Horsley's system of medication called Organotherapy "cannot claim to be a novel one, it is probably older than Aristotle, and even in the most savage state men seem to have some intuition of the propriety of appropriating the healthy organs of the lower animals with a view to becoming imbued with their particular virtues. Thus we are told that certain African tribes fortify themselves for battle by partaking of the orchitic extract of the lion, believing that thereby they become inspired with leonine valour."

Some vivisectioners we wot of might find a use for tiger's heart in their laboratories, as some of their pupils find themselves deficient in the requisite qualifications for their work.

DR. ROBERT SAUNDBY, in his address to the annual

meeting of the Midland Counties Branch of the British Medical Association, said :—"It must be admitted that the attempts to destroy pathogenic organisms, after they have gained access to the interior of the body, by the administration of so-called antiseptic drugs, have ended in failure." Little by little Listerism is being discredited. Soon nothing will be left of it but the name, like the old woman's stockings with new legs, new heels, and new feet, but still called the old hose.

DR. SANARELLI claims to have discovered the bacillus of yellow fever. The *British Medical Journal* (July 10th) is enthusiastic on the subject, and says :—"It is exceedingly interesting to note that the poison may be prepared and isolated from the yellow fever bacillus . . . when injected into the blood setting up all the symptoms of an acute attack of yellow fever." Was it "exceedingly interesting," we wonder, to the patients on whom such an experiment was tried, for it would hardly be so "interesting" on an animal.

OUR opponents have often told us of late that the discovery of the cause of the sounds of the heart was due to experiments on animals. But physiologists are not agreed as to the cause of the first sound of the heart. The *British Medical Journal*, in a leader in its issue of July 10th, 1897, says :—"The vexed question of the cause of the first sound of the heart was the subject of a contribution made recently by Sir Richard Quain to the Royal Society." If it be still "a vexed question," where is the glory of the vivisectioner's discovery? The vivisectioners claim everything and give nothing.

PROFESSOR NOCARD related at the meeting of the Paris Academy of Medicine, on the 27th July that—

"From August 1st, 1895, to June 1st, 1897, two injections of anti-tetanic serum have been administered to each of 2,707 animals. These 2,707 animals may be divided into two distinct classes, one comprising 2,300 animals, in which the first injection of serum was administered immediately after an operation which they had undergone (castration, amputation of the tail, ablation of growths and tumours, etc.). Not one of these 2,300 animals developed tetanus.

"To the second group belong nearly 400 animals, in which the first injection was not administered until one, two, three, four, or more days had elapsed after an accidental traumatism of which they had been the victims. In spite of these unfavourable conditions, none of the 400 animals treated after more or less delay succumbed to tetanus.

"One horse only, treated by injection five days after an accident, presented symptoms of tetanus, but the disease was of a very mild type.

"These results are of great importance considering that all the animals treated came from stables, farms, or villages in which tetanus had made victims a few days or months previously.

"On the other hand, during the time these experiments have been carried out, my 63 correspondents, who did not lose a single one of the 2,707 animals treated by preventive injections, observed 259 cases of tetanus among animals not so treated."

It is obvious that these cruel experiments proved nothing. Many animals and persons are seriously injured without developing tetanus, and for any practical purpose all the barbarities and suffering involved in M. Nocard's experiments were absolutely wasted.

THERE were two articles on the Pasteurian treatment of rabies in that unhealthy publication called

Health, on the 7th of August last. In the one it was stated that the Pasteurian "mortality of the last few years varies from one twenty-fifth to one-thirteenth of one per cent." The authority for the statement is one Dr. John Ruräh, apparently, but in this ill-edited paper no clue is given to where he lives. It is now pretty well known that in Paris a low mortality rate is maintained by inoculating many people in no danger of dying, and by carefully ignoring a large proportion of the well-authenticated deaths among those treated. If we knew all the details connected with the statement we have quoted, we have little doubt but that the true mortality would come out very differently. At any rate the statement is a mere parody of the official Pasteurian claim. In another pro-Pasteurian article in *Health* it was stated that "the operation of trephining is painless and requires no anæsthetic." But only those who have abandoned common-sense will believe anything of the kind. The test would be to submit Dr. Keirle himself, who makes the statement, to the operation of trephining.

THE use of nitrite of amyl in the relief and cure of angina pectoris or breast pang is commonly attributed to the discovery of its physiological properties by experimenting on animals. In a volume of *Physiological Papers* by Professor H. Newell Martin (p. 251) the history of this drug is given, and certainly does not bear out the experimenters' contention. In 1859 Guthrie observed that nitrite of amyl when inhaled caused flushing of the face, throbbing of the carotid arteries and a quickened heart-beat. These phenomena would be correctly interpreted by the merest tyro in physiology.

IN 1865, Richardson called attention to it as an agent which might be useful from its power of causing dilatation of the smaller arteries and capillaries. Thus we see that this observer had correctly estimated the properties of the drug. Next, Gamgee discovered by experiments on animals that the nitrite of amyl reduced arterial pressure to a remarkable extent, and Dr. Lauder Brunton, who was assisting Gamgee, had this fact impressed on his mind by these experiments. Experiments on animals, therefore, were "a day after the fair."

NOTHING is easier to prove in connection with our crusade than the constant use of curare without anæsthetics, yet nothing is more frequently denied. In a paper in Professor Newell Martin's *Physiological Papers* certain experiments are described (p. 13) which involved tearing away the whole front and sides of the animals' chests, exposing the heart, dividing nerves, etc. We are told (p. 20) that "the experiments were conducted in three series; in one the animal was chloroformed while the heart was being isolated; in the second it was placed under the influence of a very full dose of morphia; and in the third it was curarized." [That is to say one set of animals had chloroform alone, a second set had morphia alone, and a third group of animals suffered this frightful mutilation *under curare alone*.] "In this way (continues the experimenter) was eliminated any specific action which a particular drug might have in throwing out of gear some centre in the heart itself."

MR. H. M. VERNON, of the Physiological Laboratory,

Oxford, records some experiments on frogs, toads, and other animals in the *Journal of Physiology* (vol. xxi., No. 6). He says two experiments were made with morphia. "The effect of this drug on the frog is different from that on man, as enormous doses have to be given to get any obvious effect at all." Dr. Lauder Brunton says veratrine has no action on the brain and spinal cord. Mr. Vernon's experiments are opposed to this. He says also that in his experiments there was no trace of the strychnine-like action of morphia on the frog which Dr. Brunton discovered and describes. See how these physiologists agree!

WE learn from the *Monthly Magazine of Pharmacy* that the Americans are building a hospital in Florida entirely of glass. Our contemporary cannot see the good of it. We can; and if they would only build physiological laboratories of clear, transparent materials so that we could see what goes on in them, there would soon be an end of vivisection here.

GERMAN physicians like Soltmann and Blenheim, says the *Medical Brief* (August, 1897), are insisting that diphtheria has only been really studied since the advent of the anti-diphtheritic serum. It was noticed long before this was invented that the type was changing, and a great decrease of the mortality in private practice had been observed. "None of the changes," says the *Medical Brief*, "which have been observed after the use of the serum up to the present time, can be ascribed to a specific action of the serum."

IN the *Journal of Physiology* (vol. xxi. No. 6, p. 436), there is a paper by Drs. Fawcett and Hale White, of the Physiological Laboratory, Guy's Hospital, on "Body Temperature," in which experimenters are cautioned that "the combined influence of the anæsthetic, artificial respiration, and fixing a rabbit to a board produces such a marked fall in the animal's temperature that this method of experiment is quite inapplicable for working out problems dealing with the variations of temperature of rabbits produced by drugs." The writer says, "we believe that our experiments . . . upon rabbits whose cords are cut, or which are under the influence of curare, prove nothing about the mode of action of the drug." We heartily agree with this remarkable confession.

THE Medical Journals have for many months devoted much of their space to advertisements and laudatory articles concerning the alleged wonderful properties of various animal extracts in curing disease. The *Lancet* (July 31) says:—

"What has been established as to the value of this new form of treatment? The so-called successful results which remain and constitute a large part of the literature are such as are always reported of any new remedy to be followed only by disappointment."

IN an article in the *Lancet*, August 7th, on blood-poisoning in a lying-in woman where the case was treated with serum anti-toxin, the writer says:—

"Many cases of septicæmia, puerperal and otherwise, have now been published, in which the use of anti-toxin has been followed by extraordinary recoveries, but I have seen few in which anti-toxin has been tried and apparently failed."

No, the bacteriologists, like other quacks, do not say much of their failures. The writer in the *Lancet*, how-

ever, records death as the result in the only two cases in which he had the opportunity of trying anti-streptococcic serum.

No doubt just now the Government of the Cape of Good Hope is grieving over the money spent on science made in Germany. The engagement of Professor Koch to conduct investigations with a view to discover a protective serum against the rinderpest has proved a costly and conspicuous failure. The *Medical Press* (August 4th) admits that "the undertaking has had a melancholy ending, for it has ended in an absolute failure."

IN the report of the proceedings of the Physiological Society, June 12th, 1897, Mr. Smale Vincent made a preliminary communication on "the effects of subcutaneous injections of extracts of suprarenal capsules," which is instructive from the following observation:—

"The precise dose which will be fatal to an animal of given weight cannot be predicted, as *idiosyncrasy plays a large part* in the conditions."

So long ago as 1744 Frederic Abel, a celebrated Dutch anatomist, convinced himself, by the dissection of a great number of corpses, that medicine could never become a science founded in solid principles, because the organization varies so greatly in different individuals that the physician can never be certain as to the effect his remedies will produce. It is curious that an experimenter has just told the Physiological Society of London the same thing about the lower animals.

IN 1742 the Danish anatomist, Winslow, published a book on *The Uncertainty of the Signs of Death*, in which he established the proposition that the phenomena of putrefaction are the sole incontestable signs of real death. With all our vivisections, dissections, and experimentation, it is a fact that our physiologists to-day know no more about the matter than did Winslow in 1742.

CRUEL experiments upon sheep are not often heard of. Dr. Klein, lecturer on physiology, at St. Bartholomew's Hospital, publishes in the *British Medical Journal*, August 14th, 1897, some remarks on experiments which he performed on sheep. A bacteriological research was carried out, with a coccus christened *Staphylococcus Hamorrhagicus*, Dr. Klein says:—

"Two healthy sheep were injected subcutaneously into the thigh with a bouillon suspension of a gelatine culture. . . . Next day both animals were found ill; the temperature was raised (104° F.) and the animals did not feed; the leg of the injected side was swollen and retracted, the swelling extending over the whole leg and groin, and the skin being dark red and hot to the touch; the muscle and subcutaneous tissue puffy. The animals could not stand or walk. On the third day the condition was much worse, both as regards the general state as also that of the injected leg. Temperature 105·8° in the morning, 106·2° in the evening, breathing very rapid. At the end of three days one animal was found moribund."

This is typical of the class of experiments euphemistically termed "merely inoculation experiments entailing no more pain than the prick of a needle."

DR. KLEIN concludes his article with the following account of the second inoculated sheep:—

"This animal remained very ill for ten days; it could not stand or walk, its temperature remaining high. . . . The animal

drank a lot of water, but, although fed by the attendant, consumed very little food. . . . By the end of four weeks its temperature was still 104°, the injected leg not being used for walking; the animal fed fairly well, but was extremely emaciated."

THE *Medical Chronicle* (July, 1897), in a review of the *Annals of the Pasteur Institute*, says, with reference to the animals that have been certified by veterinary surgeons to be rabid:—

"In this group it is certain that some error may have been allowed to creep in. It is not always possible to recognize at a *post-mortem* examination whether a dog or any other animal was affected with the disease."

Such an admission of error vitiates the whole of the Pasteurian statistics.

DR. G. S. WOODHEAD, Director of the Laboratories of the Royal College of Physicians and Surgeons, has contributed to Dr. Allbutt's *System of Medicine* the article on "Rabies." In this monograph he makes the following important admission:—

"With regard to the old method of sucking the wound and applying a powerful caustic immediately, it is doubtful whether the disease ever manifests itself after such treatment, especially if the wound be small."

A PRETTY physiological quarrel about the circulation of the blood in the brain has been raging in the *British Medical Journal*. A Dr. James Cappel, of Edinburgh, was taken to task for not producing a particle of experimental evidence in support of his statements on the cerebral circulation. In the *Journal* for July 10th, he says:—

"I plead guilty, and add that I have not the slightest idea how I could thereby strengthen my position. How has experiment fared in this very question? Did not the experimenter completely overthrow Monro's doctrine? . . . For over fifty years the views of Sir George Burrows dominated and misled the opinion of physiologists, but now the cry of another experimenter is 'Back to Monro.'"

Physiology, thy name is confusion!

IN a lecture on the Body Temperature reported in the *British Medical Journal*, July 10th, Dr. Hale White says: "Experimental medicine here shows strikingly why it is, as clinical medicine has found by experience, that milk and farinaceous diet is best for fever." Why this distinction between "experiment" and "experience"? Both words are derived from the Latin *experiri*, to try.

"She caused him to make experience
Upon wild beasts,"

says Spenser using "experience" as "experiment." The physician who at the bedside proves that milk diet is best for fever is not less scientific than the physiologist who arrives at a similar conclusion by starving rabbits in his laboratory.

WE are requested to state that it is Miss Clara Evelyn Mordan, of the Stone House, Reigate, from whom the Council of St. Hugh's Hall, Oxford, has accepted an offer of £1,000 for the endowment of a scholarship. The only condition attached by the donor is that a clause be inserted in the Deed of Trust to the effect that "if any Scholar during such time as she shall hold the said Scholarship, shall perform or witness any experiment or demonstration on a living animal, her tenure of the said Scholarship shall forthwith become void."

OUR CAUSE IN THE PRESS.

The following is only a selection of the letters which have appeared in the Press since our last :—

THE HOME SECRETARY AND VIVISECTION.

(FROM THE "ECHO," LONDON, JULY 3RD.)

SIR,—What we cannot make the Home Secretary see, or rather what his instructors take good care he shall not see, is the fraudulent use of curare, after a few whiffs of chloroform have been given just to comply with the letter of the Act. By means of curare the provisions of the Act of Parliament are set aside, and the animals suffer as much as, or even more than, if the legislature had never interfered to protect them. The public conscience is lulled to sleep, the House of Commons laughs, and everybody except the well-instructed anti-vivisectionists, hugs the comforting doctrine to his soul that the animals do not suffer anything at the hands of the merciful scientists. Chloroform is given at the beginning of the operation, say of tearing open the chest and exposing the heart, perhaps a little morphia is injected. The chloroform cannot be continued because it would spoil the effects of the experiment; it might also cause the death of the animal if exhibited for too long a period. Then comes in the curare, and this is the point to bear in mind. The curare is injected before the animal recovers from the chloroform. When the curare takes effect, as it does rapidly, there is nothing whatever to show that the animal is suffering; if we entered the laboratory now we should see a motionless victim, quiet as a corpse, lying in the torture trough with nothing to tell us it was alive, nothing but the artificial respiration apparatus pumping air into the paralysed lungs to let out the secret of the hellish mischief carried on in the name of science. You ask the operator, "Can the creature feel?" "Certainly not," he replies, with his tongue in his cheek, "he has been anesthetized with chloroform and morphia." It may be true that he *has been* anesthetized. Who is to tell after the curare has done its work when the effect of the true anæsthetic has ended, and the false anæsthesia or semblance of death, the effect of the curare has begun? You see the artificial respiration apparatus at work, that is for the curare, but it may be required for other reasons. If the physiologist chooses not to commit himself, he can deceive not only the Home Secretary, but anybody who visits his laboratory and catches him at work. The Home Secretary has been instructed to say that no experiments entailing severe pain ever take place in this country without sufficient anæsthesia. In his reply to Mr. Weir, Sir Matthew Ridley declared that curare was only used when the animal could not feel pain. Now, chloroform cannot be used in conjunction with curare as it would be impossible to tell what the chloroform was doing when the curare paralysis had set in. In a set of experiments recorded in the *Journal of Physiology*, vol. xxi., p. 323, published a few weeks back, Professor Leonard Hill says in a paper on the circulation that "*It is absolutely essential that chloroform should not be administered during the periods of observation.*" The chest and belly were opened and the spinal cord divided, etc. Curare was injected, and the pretence of anæsthesia was maintained by giving a little morphia, which is not an anæsthetic, but only a narcotic. How long are we to be bamboozled by experimenters who treat their victims, in defiance of the Act, with the same cruelty as animals are treated in countries where there is no law which pretends to protect them?—I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

Tynemouth House, Victoria Park Gate, N.E., July 29th.

SERUM AND VIVISECTION AT MASON COLLEGE.

(FROM "THE BIRMINGHAM DAILY GAZETTE," JULY 27TH.)

SIR,—We have hitherto had the satisfaction of believing that Mason College was free from all taint of the vivisection mania, with all its cruelties and learned futilities. But it may be doubted, from your abstract of the Health Committee's report, whether this happy condition of things is likely to last much longer, if it still exists. Of all forms of vivisection one

of the most loathsome and cruel is the inoculation of disease. Of course, we shall be told that the superannuated horses, mules, or donkeys, into whose veins the virus is squirted for the purpose of producing the diseased "serum," really like the process, and gain in condition under it. Of this we may believe as much as we like. You quote as follows:—"The serum, together with the loan of a syringe for its injection, is supplied from Mason College on the application of medical men. The free supply of serum was commenced on June 24." At whose expense was this "free supply" made? Are the wretched brutes whose poisoned blood yields the supply of "serum" operated on at Mason College or by any of its officials? If so, we have there the nucleus of a vivisectioner's den. Other experiments on the living animal, with the usual effects, will necessarily follow, for the crave for "scientific" cruelty grows by what it feeds on. I suppose the City Council will set aside funds for the support of those persons in whom the use of this foul serum may produce paralysis, disease of the kidneys, or other mishap; but this is the look out of the ratepayers. The concern of the city at large is with the threatened introduction of vivisection at the college.

A. PHELPS.

Edgbaston, July 26th.

ANÆSTHETICS AND VIVISECTION.

(FROM THE "CATHOLIC TIMES," JULY 30TH.)

SIR,—The interesting correspondence on vivisection in the *Catholic Times* prompts me to refer to the subject: A great deal of capital has been attempted to be made by vivisectioners and their sympathizers from the administration of anæsthetics, often merely a whiff of chloroform, to the victims of their torture, the object being to make it appear to the public that vivisectioned animals suffer no pain whatever, and the Prince of Wales has, unfortunately, been caught in the toils.

Your intelligent readers, however, are not likely to be led away by such fiction; that is, if they have taken the trouble to probe the question for themselves and not taken as gospel the *ipse dixit* of those who are on their defence. The preponderance of evidence goes to show that in most of the experiments made on living animals, to administer anæsthetics would vitiate the investigations, by placing the whole organism of the miserable creature in an abnormal condition; and even if the subject of experiment be anesthetized during the initial operation, no account is taken of the after-sufferings which, in many cases, must be excruciating.

Where do anæsthetics come in, in taking a number of dogs, burning and scalding them to death by pouring boiling water on different parts of their body several times in succession, or by covering them with turpentine and setting fire to it (Royal Commission Report, Dr. Carpenter, Q. 5616)?

Did anæsthetics prevent the sufferings of the monkey whose skull was sawn open, his brain cut into, red-hot irons thrust into the opening, acids of various kinds injected into the cavities, and was kept alive in this state for weeks or months (experiments of Dr. Ferrier, Royal Commission Report, p. 220; p.p. reports of Wakefield Lunatic Asylum, appendix to Royal Commission Report)?

This, and worse than this, is the handiwork of vivisectioners, and yet we are asked to believe that their victims suffer no pain! If it be true that these experiments are painless, and that anæsthetics are all-sufficient in preventing it, why do not the vivisectioners experiment upon themselves or on one another?

They would then, certainly, get more reliable results, if such can be obtained by vivisection, than it is possible to do by dissecting alive domestic and other animals; they would also avoid the charge of cowardice, of which they are undoubtedly guilty, in torturing creatures weaker than themselves.

As long as we as a nation tolerate vivisection we are morally responsible for this horrible crime, which is thrust upon us by men whose zeal for science, falsely so-called, has blunted their moral perception.

I appeal to all classes, from the highest to the lowest, to join the crusade against cruelty, oppression, and wrong. Attempts to gain knowledge by the wilful mutilation of God's sentient creatures have never benefited, and will never benefit, mankind.—Yours, etc.,

JAS. R. WILLIAMSON,

42, Stibbington Street, London, N.W.

LAYING THE GHOSTS OF TIME-WORN ARGUMENTS.

(FROM THE "CATHOLIC TIMES," AUGUST 13TH.)

SIR,—I am not aware that anybody tortures fleas. Such insect pests may be rightly killed just as vermin are destroyed and animals slain for food. It is trivial to compare killing to prolonged torture. The late Sir William Fergusson, F.R.S., Surgeon to the Queen, told the Royal Commission, "I have reason to imagine that sufferings incidental to such operations (in vivisection) are protracted in a very shocking manner. I will give an illustration of an animal being crucified for several days, perhaps introduced several times in a lecture-room, for the class to see how the experiment was going on." Does any reasonable being consider for a single moment that such an act is on a par with the killing of a flea?

Let us be funny in due season, but on a question like this let us behave as men if not as doctors. I cannot help cats catching mice, nor tigers catching antelopes, nor whales swallowing shrimps. All this is trifling.

Tennyson says that "Nature red in tooth and claw" shrieks against the Christian's creed. Most of us feel with the poet the terrible mystery of suffering in the lower creation. Much of that suffering we cannot prevent. As Christians, I apprehend, we must not add to it. Man is higher than the cat, and must not be cruel because tigers are bloodthirsty.

"Pain in man bears the high mission of the flail and fan,
In brutes 'tis wholly piteous."

"L.R.C.P." imputes bad motives to those who oppose scientific cruelty. It seems that an apologist of vivisection is unable to appreciate any course of action apart from its commercial aspect. I am sufficiently acquainted with the literature of the localization of brain functions to know (*pace* L.R.C.P.) that the matter is still in the investigation stage.

There is a work to be found on the desk of every up-to-date doctor, called "The Medical Annual." In pages 143-149 of that work for the present year reports of experiments in brain surgery are given, which show that the investigations are still going on. On p. 147 is a table which shows that in operations for removal of brain tumour "the operation failed to reveal the expected tumour in one quarter of all the cases; the mortality amounts to about another quarter, and in only about half the cases was a tumour removed without fatal result. . . . Of the seventy-two cases which 'recovered,' many were doubtless rendered more or less paralytic, while in others recurrence will have ensued."

I have no desire to "mislead" your readers, nor to "carefully keep hidden" any facts whatever bearing on this question. My object is to expose the outrageous claims made by vivisectors as to the value of their researches to medicine and surgery. Your correspondent quotes a nonsensical paragraph from the *British Medical Journal* of May 29th, which endeavours to show that the opponents of vivisection cannot logically feel a pulse, use the stethoscope, or administer nitrite of amyl. This is the sort of clap-trap the medical journals employ in default of more convincing arguments in support of physiological research by experiments on animals. Listerism is nothing more than the cleanliness of the dairymaid transferred to surgery. The discovery of the stethoscope had as much to do with vivisection as the occultation of Mars. The discussion of the causes of the heart sounds is not finished yet. Harvey only made his great discovery of the circulation when he gave up experimenting on animals and reflected on the use of the valves of the veins as seen in dead bodies in the dissecting room. Nitrite of amyl has an action so obvious and immediate that no experiments on animals were necessary to discover its uses. "They could have been arrived at," says Dr. McCormick, Deputy-Inspector of H.M. Hospitals, "by letting a patient inhale its vapour. Animal torture was unnecessary." I do not believe in antitoxic serums for the cure of diphtheria or any other diseases. Medical blood-poisoning is not, in my opinion, the right way to cure any malady.—Yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

August 6th.

JUDGMENT FOR THE ANTI-VIVISECTIONISTS.

(FROM THE "CATHOLIC TIMES," AUGUST 20TH.)

SIR,—The sincere thanks of all your readers who possess a

spark of sympathy for suffering brutes is due to Dr. Berdoe, M.R.C.S., etc., for his quiet and telling exposure of the horrors of vivisection. I have studied the recent correspondence on this subject, as also that to which the late kindly and distinguished Lady Burton contributed an effective letter some time ago, and weighing the evidence and arguments adduced by each side am led at once to the conclusion that vivisection is atrocity, and of the worst kind, because of its being cloaked in a scientific garb.

Dr. Berdoe not merely by his own personal statements has laid low your doughty vivisectionist champions, but by his quotations from the records of that society which, Heaven preserve us! Catholics, however few, can be found to abet, has placed emphatically on the anti side those who, like myself, did not from a purely scientific point of view too well understand the subject. A reverend correspondent, who signs himself "D.D.," in a long and rambling personality letter, begs that Dr. Berdoe shall no more be quoted. Well, we "thank him for that word," it is such a candid if blundering admission that the medical gentleman has torn the mask from the vivisectors' faces and shown them to us in all their hideousness. More power, therefore, to Dr. Berdoe's elbow, his heart, and pen. Let him and others continue to let in the light, to give us, however sickening, more quotations from the "Chronicles of the Kings of Vivisection," and that will suffice, as pity for frightfully tortured brutes is not so dead in the breasts of those who possess the franchise in Great Britain and Ireland as not to be strong enough to stamp out this abominable scientific fraud.—Yours, etc.

JOSEPH GLENNON.

24 Lavinia Street, Belfast, August 1, 1897.

A "SUNDAY TIMES" EDITORIAL.

(PUBLISHED ON AUGUST 15TH.)

The discussion on Vivisection in our columns continues. From the warmth with which some of the controversialists write it is evident that feeling on the subject runs high. There can be very little doubt on one point, viz., that the present Vivisection Act is very imperfectly and irregularly administered. There is an inspector, but no inspection. He has to be content with the reports furnished of their experiments by the licensees themselves. He knows nothing personally as to whether or not they have complied with legal requirements. If any one proposed to trust entirely to the honour of publicans the carrying out of the terms of their licences, and to accept their own reports as to the time they closed, etc., as sufficient, there would be an outburst of inextinguishable laughter at the very idea of such a thing. Yet why should it be considered that one class of men can be trusted to comply with the terms of their licence, without inspection, and that another can not be so trusted, but must submit to very close inspection? Many physiologists contend that certain experiments must be tried on men before they can give any definite or useful results. At present, human experimentation occurs furtively and occasionally in some hospitals; but humane feeling is against such clandestine work, and revolts at the thought of taking unfair advantage of the helplessness of a patient. If physiologists must have their human subjects, why not let the experimentation be carried on honestly and openly? Why not, for instance, adopt the plan recommended by various writers from the time of Hippocrates downwards, of using criminals condemned to death for this purpose? Of course, we mean on strictly defined conditions and with limitations. Say, that murderers condemned to death should be offered their life on condition that they would allow themselves to be made the subjects of such experiments as would not entail death, but were calculated to be useful in saving the lives of others, the alternative of death, medical experiment, or vivisection to be left to the free and unfettered choice of the condemned man. Of the two evils this seems to us to be the least, though such an arrangement would, of course, need to be surrounded with pretty stiff safeguards against abuse, and the "inspection" would have to be real, and not nominal.

[The first part of the above article shows that the editor (a lady) has rightly grasped a number of the strong points of the

anti-vivisection controversy. Like a good many other people, however, she seems to fear the effect of shutting the door on vivisection altogether, lest something of use should be lost to the human race. We who are more deeply initiated into a knowledge of vivisection are convinced that nothing of the kind could ensue. Quite the reverse. "False light" must be misleading. But if vivisection of animals be objectionable and wrong, the suggested sacrifice of human beings, even of murderers, is more so. Murderers are men—or women—and though they are criminals they have not broken every law, but one only. For the breach of that law they are liable to the allotted penalty; but justice cannot rightly be administered by bargain, and it would not be justice, but injustice, to submit a murderer to vivisection, instead of carrying out the legal penalty.—ED. Z.]

Obituary.

THE BISHOP OF WAKEFIELD.

The Right Rev. Dr. Walsham How, who for ten years had occupied the position of a vice-president of the Society, died at Dhu Lough, Ireland, whither he had gone in consequence of ill-health, on the 10th of last month. The late Bishop was a Shrewsbury man, and in 1851 became rector of Whittington, in the county of Salop. While here he met with many superstitions among the people, some absurd, some cruel. One of the most horrible of the latter was "to draw three yards of black ribbon through the body of a frog, and wind it round the neck." Whether this cruel custom drew his attention more pointedly than before to the necessity for opposing the infliction of barbarous cruelty on animals, we cannot say, but it is not improbable. In 1872 Dr. Walsham How was appointed the first Bishop of Bedford, Suffragan to the Bishop of London, and by-and-by it became known that he sympathized with the opposition to scientific cruelty. It was not, however, till the month of May, 1887, that he actually joined the Society; but from that time he had been a hearty and sympathetic supporter. In East London the late Bishop was much beloved, and his translation in 1888 to the new see of Wakefield, caused general regret. The Bishop, who was seventy-three years of age, was buried at Whittington, which is near Oswestry.

The following story in connection with the late Bishop will be interesting to our readers. It comes to us on the authority of a clerical friend, who has shown us the original letters. While still a parish parson, Bishop How wrote a *Commentary on the Gospels* which became very popular, its issue having reached the sixtieth thousand in 1876. In commenting on the well remembered incident recorded by St. Matthew (xii. 11, 12), of the sheep falling into a pit on the Sabbath day, the Saviour asked "How much then is a man better than a sheep?"

The Bishop's Commentary on the verses indicated was as follows:—"What man," etc. This argument is not recorded by either St. Mark or St. Luke as having been used by our Lord on this occasion. St. Luke records it as used on a different occasion, namely, upon the healing on the Sabbath day of a man 'which had the dropsy' (St. Luke xiv. 2-6). It is, however, so natural an argument that our Lord may well have used it on two so similar occasions. If it be said (as has been said), 'The cases are different, for in that of the sheep fallen into a pit, there is an immediate necessity for help, whereas a withered limb might wait without injury another day,' the answer is found in the words, 'How much is a man better than a sheep?' Any good that can be done to man outweighs even the saving of the life of a dumb beast." Our friend not liking the

tone of this wrote the Bishop a note of gentle expostulation. The result was the following two letters—the letters we may venture to say, of a true-hearted man:—

"DEAR SIR,—Your letter has only reached me to-day, as I am paying some visits to friends in Scotland. I am much obliged to you for calling my attention to the words in my commentary which you quote, and which I had wholly forgotten. I quite agree with you that the words are misleading, and I need hardly assure you that I had never dreamt of their bearing the meaning you put upon them, or suggest might be put upon them by others. I shall, as soon as I return home, see if I can so alter them as to leave no chance of such misinterpretation of my meaning, as they are now open to. I very frequently in sermons and speeches denounce cruelty to animals, and tho' I might not perhaps go all lengths with you, I should be greatly grieved if any words of mine could be construed into carelessness of the sufferings of God's dumb creatures.

"Yours very faithfully,

"August 11th, 1893." "WM. WALSHAM WAKEFIELD.

"Bishopgarth, Wakefield, September 19th, 1893.

"DEAR SIR,—I have made the correction in the commentary in St. Matthew xii. 11, taking out the whole passage beginning 'If it be said' down to 'dumb beast,' and substituting entirely different matter.

"Let me once more thank you for calling my attention to this blot. It is a great many years since the commentary was written, and I had wholly forgotten it. Yours very truly,

"WM. WALSHAM WAKEFIELD."

THE DISAFFECTION IN INDIA.

The following letter has appeared in several newspapers:—

SIR,—Four or five years ago a significant warning on the reported disaffection in India was given by Mr. W. Theobald, an Anglo-Indian ex-official of over thirty years' residence. He claimed that the Pasteur exploitation out there was calculated to offend and alarm the religious sentiments of the native populations, and writing to the *St. James's Gazette* he said:—"The risk incurred by the precious outbreak of Pasteurism is simply appalling. Could the Government of India have suddenly become insane to tolerate an experiment of this nature, fraught with such frightful danger to the fidelity of our native subjects? It is of national importance, if a catastrophe is to be avoided, that this Pasteurism be prohibited in India, and no time lost in the matter."

It does not appear that any notice was taken of Mr. Theobald's warning by the Government; and though since that time several other authorities have frequently written to the Press of this country, showing that the Indian Government's proposal to establish a Pasteur Institute was the cause of much general feeling of discontent and dissatisfaction among the public, no steps have yet been taken to make good the injury already done. The folly of it all is as plain as day.

Now, my contention is that the Pasteur exploitation has given rise to a deep and settled conviction among the Hindoos that their religion is menaced by it, as it was by the greased cartridges; how far the present outbreak is affected by it remains to be seen. But that it plays no inconsiderable part is obvious.

My friend, Mr. Mark Thornhill, who is one of the few civil ex-officers now remaining who went through the Indian Mutiny, and has a knowledge of the Hindoo's feelings such as in ordinary times it is hardly possible for a European official to obtain, in a letter to me a few months ago said that for the sake of argument he would credit the Pasteur system with all the benefits claimed for it by its strongest advocates. "But," he added, "surely they are but dust in the balance compared with the ruin, the slaughter, the countless horrors, even the possible danger of our Empire, such an outbreak would occasion." The Government has risked the possibility of such calamities as are here spoken of only to carry out what after all is a mere scientific experiment. If the outbreak, which every one so much dreads, is really upon us, the consequences will be terrible, for I have pointed to one cause only; in fact there are many, the chief of which is that possibly we rule with too stern a hand. Or is the alarm and irritation only temporary? None of us in England know.

JOSEPH COLLINSON.

79A, Great Queen Street, London.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, WEDNESDAY, SEPTEMBER 1st, 1897.

THE DIPHTHERIA SCOURGE.

LAST month a claim was made, for the first time so far as we are aware, that the use of anti-toxin—*i.e.* the wilfully infected serum of the blood of horses—had affected the gross mortality from diphtheria in London. The claim was not made by the scientists or other members of the medical profession, but was left to be promulgated by the CLERK of the Metropolitan Asylums Board, at the meeting of that body on Saturday, August 7th. It is admittedly the case that prior to and at the date named the number of persons seized with diphtheria in London was very large. Indeed, in the words of the official referred to, "the number of patients was excessive. In fact, the disease had been steadily gaining ground in London for a considerable time past, and its continuous development had puzzled their medical staff and everybody who had examined into the matter." Although there had been more outbreaks or attacks, however, the rate of mortality from the malady had fallen, and the CLERK to the Board went on to say, "It was satisfactory to be able to record that, consequent upon the use of anti-toxin, the percentage of deaths from diphtheria had been reduced to an appreciable extent."

If, as we suspect—and he could hardly have any first-hand knowledge upon the point himself—the CLERK was simply acting as the mouth-piece of the Medical Staff of the Metropolitan Asylums Board, he and they have lost no time in making a claim on behalf of anti-toxin the moment a favourable symptom has appeared. One, at least, of the medical journals, however, did not regard the facts as affording evidence to the same effect. We have at intervals for a long time past, quoted statistics on this matter put forward by the *Lancet*, and we are bound to say that in that journal we have found frank and unbiassed records. In the present case these have been repeated, and in the issue of the *Lancet* for August 7th there appeared a statement that while the total number of diphtheria attacks had notably risen the per case mortality had fallen. The *Lancet*, however, did not

attribute this state of things to the use of anti-toxin, but said that, "with an increasing amount of diphtheria, we seem this year to have, for the time at least, a milder form of the disease."

This is good news, and we hope it may be true, and that the seizures, as well as the deaths, may soon show signs of a fall. At present, however, we cannot help inferring from the facts before us, that the increase of diphtheria cases seems plainly to show that the causes of the disease exist in as strong a form as ever, and that it is to those causes that those desirous of preserving the public health and advancing sanitation must address themselves. We do not wonder that the Asylums Board's "medical staff, and every body who had examined into the matter," were puzzled; but we venture to suggest that in resorting to anti-toxin for the treatment of the developed disease they are working at the wrong end. Prevention is better than cure, and the cases as well as the mortality in regard to most of the zymotic diseases have been lessened by improved sanitation. But with all their science, added to the diplomas for public health now so freely granted, the so-called experts have been unable to put their finger on the plague-spot, in regard to diphtheria, and say, "Here the disease originates." They are confessedly puzzled, and then, in that spirit of braggadocio which is so marked a characteristic of the bacteriologists of the day, it is sought to attribute a decrease in the death-rate to the use of anti-toxin. But if for one short period fewer people have died, more than ever have suffered from diphtheria, and it is not attempted to be urged that anti-toxin will prevent its outbreak. In fact, it is not known what will. If science be, as has been said, common-sense at its best, surely the common-sense of those concerned to deal with these matters ought to be directed to elucidate the causes from which so many cases of diphtheria spring, and until they have done that their science is a delusion and their anti-toxin a vanity.

It is a long time now since the chief vivisector at the conjoint laboratory of the Medical and Surgical Colleges said that anti-toxin was only an adjunct to the treatment of diphtheria, and it is much more likely that a milder form of the disease has decreased the death-rate from it than that anti-toxin, being but an adjunct, has had any effect upon it. It was only in our last month's issue that we gave the statistics of diphtheria mortality for the United Kingdom for the four quarters of last year. It will be useful now to add those for the first two quarters of this. From January to March the death-rate was 0·27 per 1,000 living, or 0·05 in excess of the average rate in the previous ten corresponding years; from April to June the rate was 0·19 per 1,000 of the living population, or 0·01 in excess of the average. So that anti-toxin, available as it has been throughout the kingdom, so far from having saved life, has again failed to prevent a general increase of mortality.

THE VIVISECTOR IN THE LUNATIC ASYLUM.

A FEW years ago we made a protest against the appointment by the Asylums Committee of the London County Council of a licensed vivisector as professional pathologist. Many of our friends feared that the admission of an experimenter on animals to an important office on the medical staff of an asylum for the insane would open the door to a possible danger, and would place the most helpless of our sick brethren and sisters at the mercy of unscrupulous scientists. No doubt the presence of a vivisector in the wards of a lunatic asylum is a far greater danger than his connection with a general hospital. Dark doings have often taken place in our asylums. The age of humanity has succeeded the barbarous times not so very long gone by when the unsound in mind were treated like wild beasts, chained naked to the walls of dark and filthy cells, subject to the lash of brutal keepers who so recently as the end of the last century were permitted to exhibit their wretched charges to an inquisitive public for a penny or twopence a head. We flatter ourselves that we have changed all that, and that, although it is probable that individual attendants even now treat their patients with occasional cruelty if not violence, we like to believe that everything is done that is possible to maintain in health and reasonable comfort the poorest of the mentally afflicted. We have been reckoning, however, without the vivisector. The fears of our friends who opposed the election of a licensee as pathologist at Claybury Asylum were not groundless. We have just read, with feelings of horror and indignation, the account of Dr. H. BERKLEY, of a series of experiments of a most cruel, not to say murderous, character, published in the July number of the *Bulletin of Johns Hopkins Hospital*, Baltimore. The experiments were performed on eight patients in the City Asylum with a view to test the effects of overdosing with thyroid extract now so much vaunted by experimenters as a cure for myxœdema, and a remedy, moreover, so they say, indisputably the outcome of vivisection.

Dr. BERKLEY's article begins by remarking that "the favourable side of the administration of the thyroid extracts is shown in the very numerous articles in current medical literature, published both in this country and in Europe. Comparatively few of these papers treat of other than the bare clinical results from the most conspicuous standpoint, and it is quite safe to say, after a review of some of them, that the results would have been as brilliant had no medicament been administered." It was determined in this scandalous torture-den to induce grave symptoms of poisoning in certain incurable patients, whose minds were so enfeebled that no complaints they could make would be likely to be listened to. Dr. BERKLEY says—"The first portion of the investigation was made upon eight patients at the City Asylum, who, with one exception, had either passed or were about to pass the limit of time in which recovery could be confidently expected." That is to say, eight persons

who were either known to be dying, or at least in such a state of health that their recovery was impossible, were selected to be tortured and done to death, that the effects of continuous poisoning with a dangerous drug might be duly watched and recorded. Amongst the more prominent symptoms induced by the drugging were loss of weight, enfeeblement of the heart's action, digestive disturbances, and fever. These effects were present in more than half the cases. Two patients, we are informed in the most scientific phraseology, and the most heartless manner, were "frenzied," and of these, "one died before the excitement had subsided." Is there any other term that can be employed to explain the death of this victim than "murdered scientifically"? The writer of the paper in question accepts this view. He says—"The above experiment upon eight human subjects points out conclusively that the administration of even the very best and purest of the commercial dessicated thyroid tablets is not unattended by danger to the health and life of the patient." The danger to health was actually proved by the marked influence of the poison upon the future mental powers of the subject.

Here, then, we have proof, if such were needed, that the "true researcher" hesitates not when he gets the chance, and cannot be made to answer for his crime, to subject to torture and deprive of life, such human beings committed to his care whom he may safely employ as "beasts of research," as the Germans call hospital patients. We are incessantly told that animals are employed in the laboratories that human beings may be spared the effects of painful experiments. If such experiments have really the value attributed to them, why were these eight patients exposed to torture and death by those who were employed to minister to their needs?

We have always maintained that the physiological laboratory and the hospital ward are equally the haunts of the vivisector. The one is complementary to the other, and this case affords additional proof of the charge. Dr. BERKLEY says—"These results obtained, we then decided to further pursue our experiments upon the lower animals." It seems a matter of indifference to the vivisector whether he begins with the dog and goes on to the man, or *vice versa*. He wants both dog and man, rabbit and woman, rat and child; he makes no nice distinctions, for he has no mercy, no sense of justice, all living creatures are his materials, and these he will find with or without leave or licence. This infamy will continue until public opinion is sufficiently awakened to stop it. By condoning vivisection, Society condones wilful murder, and must be made to know it.

GENERAL SHERMAN was once a patient of the late Dr. Bliss. The doctor had been treating him for some time, when one day the general said: "Doctor, I don't seem to be getting any better, for all your medicine." "Well, General," replied the doctor, jocosely, "perhaps you had better take Shakespeare's advice and 'throw physic to the dogs.'" "I would, Doctor," replied the sick man, as he turned his head on the pillow—"I would, but there are a number of valuable dogs in the neighbourhood."—*The Christian Worker*.

"THE VIVISECTOR'S CATECHISM."

Under this heading an animated correspondence was carried on in the *Sunday Times* in the latter part of July and the beginning of August. The following replies from the anti-vivisection side will sufficiently indicate the kind of catechism which had been formulated:—

(FROM THE "SUNDAY TIMES," JULY 25TH.)

MADAM,—I should be grateful if you would permit me to say a few words in reply to your correspondent "William Burton," particularly with reference to his contention that pain is not knowingly inflicted unnecessarily in the Physiological Laboratory, and that "it is exceedingly rarely that a procedure involving pain to the animal is undertaken upon an animal which has not been first rendered insensible." Anti-vivisectionists do not charge vivisectors with inflicting wanton pain. From the experimenter's point of view we may concede that the suffering they inflict is necessary to the success of the experiments. It does not make it any more justifiable for all that. The Spanish Inquisitors did not consider that they inflicted pain unnecessarily—they racked and burned their victims alive to save their souls and keep heresy out of Spain. That human vampire, Philip II., steeped to the lips in blood, was never free from the suggestion that he had not persecuted enough to save his soul. It is not for the physiological expert to decide what suffering is "necessary" for the success of his work. It is for the nation at large to say whether he shall be permitted to break the law that punishes costermongers and carmen for torturing the animals under their care. The vivisector may one day think it "necessary" to experiment on me. Society must restrain men from doing what the best men and women decide ought not to be done. We have decided that tradesmen must not work horses who are unfit for work. We are asking Parliament to make it penal to torture animals even for the advancement of science. Your correspondent wishes your readers to believe that it is exceedingly rarely that a painful experiment is performed upon an animal which has not been first rendered insensible. I deny this, and can prove that it is not the fact. The Inspector's Report and Vivisectors' Returns for 1896 are now before me. I find that in 1896 in England and Scotland 5,217 experiments were performed under Certificate A (special for experiments without anæsthetics), 875 under Certificate B (dispensing with the obligation to kill the animal before recovering from anæsthesia), and 242 under Certificate E or EE (permitting experiments on cats or dogs, without anæsthetics). One of these licensed vivisectors admits the infliction of twenty-eight wounds which were not painless. This same experimenter, in a paper published in the *Journal of Physiology*, describes some of his experiments on dogs as consisting in opening their chests and exposing their hearts, and he says that chloroform could not be employed because its use would have spoiled the value of the experiment. So Professor Rutherford, in his experiments on the bile of dogs, says he could not use chloroform for the same reason, but employed the drug curare (the hellish wourali of Tennyson's poem)—hellish because it keeps the animal paralysed, while it leaves sensibility to pain intact. "Which is easier," asks your correspondent, "to operate on an anæsthetized animal, or an animal not rendered insensible?" Dr. Lauder Brunton told the Royal Commission that curare is used in order to keep the animal quiet, and to make the experiment an easier one to conduct. Dr. Sharpey said, "The chief use of employing curare is to render the animal quite still." Said Claude Bernard, "Curare renders all movement impossible, but it does not hinder the animal from suffering." It is all very well to say that many of the experiments performed without anæsthetics are mere inoculation experiments "involving no more pain than the prick of a needle." No doubt, so far as the primary puncture is concerned. But what about the effects of the poison injected? How about the rabies caused, the inflammation of bowels, the abscesses, the lingering death by fever and exhaustion caused by the virus thrown into the creature's system? It is no answer to these charges against vivisection to abuse those who make them. "No case; abuse plaintiff's attorney," is an old trick and well understood. The agitation, says Mr. Burton, is got up by "interested parties." Who defends the practice of scientific cruelty but

interested parties? Either those who aim at winning fame and distinction in the medical and scientific world, or those who wish to be considered "up to date" and men of progress, are the chief defenders of vivisection. Let us, however, abandon mutual abuse, and discuss the question honestly and without concealment of the truth. Dare any apologist of vivisection do this?—I am, Madam, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

July 20th, 1897.

MADAM,—Without the slightest desire to enter into the broad discussion of vivisection, I still beg leave to point out that under the heading of "The Vivisector's Catechism" in your issue of the 18th, Mr. William Burton flagrantly contradicts himself. In Answer 5 of his catechism he states: "If one truth in comparative physiology can be affirmed with more certainty than any other it is that the higher the animal the more sensitive it is to pain or pleasure . . . that men of coarser fibre suffer less from a similar cause than they of finer culture." But in his Answer 11 he states: "There is a steadily increasing deterioration of the civilized races of mankind, chiefly evidenced by diseases and derangements of the nervous system. People suffering from such ailments are growing less and less able to endure pain themselves or to hear of it in others, or even in brutes; and these are they who form the rank and file of the anti-vivisectors." One could not wish for a better specimen of the "Heads I win, tails you lose" argument; sensitiveness to pain is stated to be a sign of the higher animal and finer-cultured man when that suits Mr. Burton's argument; on the other hand, it is stated to be a sign of deterioration and nervous disease when Mr. Burton's position needs it to be so. The arguments of Mr. Burton's adversaries have provoked in him, he tells us, either pain or amusement; I wonder whether they have ever so completely given themselves away as Mr. Burton does when he tells us that greater sensitiveness to pain is a sign of finer culture in man, and then blunders into the admission that his opponents have this greater sensitiveness, thus plainly putting himself, in his own words, into the position of the "coarser-fibred man," and his adversary into the position of the "finer-cultured man." It was he, not I, who said it.—Sincerely yours,

WILLIAM PLATT.

MICROBES AND DISEASE.

(FROM THE "BURY GUARDIAN," JULY 31ST.)

SIR,—Your correspondent, "G. Lane," seems to have been suddenly bitten, *à propos* of nothing in particular, not by a mad dog, but with a desire to advertise M. Pasteur, the author of a discredited treatment for mad dogs' bites. He states that whereas the mortality among persons bitten by rabid animals before Pasteur's treatment came into use was 15 per cent., it has been reduced to one per cent. In proof of this he refers back to the year 1887. I can give him something later than that. In the Pasteurian report for 1896, it is stated that the mortality amongst those treated was no more than 0.30 per cent., or not quite one in 300 of the inoculated. But, sir, the important question is, How is this average arrived at? It is arrived at by inoculating as nearly as possible all comers. Amongst the people inoculated last year, 455 out of a total of 1,308, or above one-third of the whole, were bitten by dogs only "suspected" of rabies, and in whose bite there was not known to be any danger. If these were, as they ought to be, deducted from the basis on which the average is struck, it is obvious it would make a very great difference to the percentage of deaths. Again, from the Pasteurian side only three deaths were admitted for the whole of last year, whereas I know of seven well-authenticated deaths myself. When patients who have been treated at the Pasteur Institute in Paris leave that institution, they are lost sight of by the authorities. Some of them die, and their deaths are recorded in the newspapers, but the Pasteurian authorities take no notice of that. They seem only to record a patient's death when it is medically reported to them. Many deaths, therefore, occur of which they take no account. It will be seen, then, that by making the total of patients treated—whether in danger or not—as large as

possible, and keeping the record of deaths low, it is quite easy to make a low average. But Dr. Zienetz, a perfectly independent medical man, living at Warsaw, having investigated the Pasteurian method and statistics on the spot with the consent of the authorities, showed the true mortality after the Pasteurian treatment to be about the same as it was before that treatment was invented, or where it was not used. After this, can the opposition of those who have followed the Pasteur treatment from the first be accurately represented as "blind?"

Mr. Lane seems only lately to have found out "that there are millions and millions of parasites or germs of disease floating in the air around us, in the water used for cooking," etc. The scientific bacteriologists, too, often speak as if those organisms had only lately come into existence. But they must have existed from the beginning of time, and yet in spite of this, and the alarming pictures drawn by your correspondent and others, mankind has survived! The fact is that the healthy man can and does inhale and digest these organisms without taking any harm, until the conditions by which he is surrounded favour the development of disease. A great authority has said that England, having been provided with a supply of pure water, can snap her fingers at cholera. Where all other necessities and surroundings are pure, she may snap her fingers at other dread diseases. This proves the non-necessity of inoculations to preserve health, and I submit that your correspondent on his case for Pasteur must have judgment given against him.

Your obedient servant,

BENJAMIN BRYAN,

Secretary Society for the Protection of
Animals from Vivisection.

20, Victoria Street, London, S.W., 27th July, 1897.

CORRESPONDENCE.

THE NECESSITY OF A SCIENTIFIC ATMOSPHERE FOR DOCTORS.

To the Editor of "THE ZOOPHILIST."

SIR,—To-day one of our Bristol doctors in course of a conversation, in which I attempted to show the danger and non-necessity of experiment upon living animals, said "that (experiment) was absolutely necessary for the medical man; it set up for him a scientific atmosphere in which only could he think." The answer to this does not seem very difficult to find. Is not the statement based upon a false definition of science? I asked the doctor what scientific atmosphere of value to himself could be "set up" by the multiplying of pain upon animals or the creation of diseases in them? Also, if clinical observation is not the only sure source of knowledge to one who may desire to be a practical healer of disease, and to alleviate pain in the suffering patient? I pointed him to the case of a female patient within the radius of his own practice, who died yesterday after more than twelve months of lingering suffering. This case, I claimed, would be found more fruitful of benefit to the practitioner, if carefully studied, than any number of experiments made upon animals could be. I fear our medical men have so bound themselves to the fetish of "research," that they are losing the power of observation. While they are perhaps hoping and expecting some expert to discover something along the line of animal torture, the field of human suffering remains unexplored and unexamined, except when some case of interest is at hand which allows of some theory being tested. It is dreadful to contemplate, but the fact is many doctors are fast becoming mere theorists of healing, who seem to learn nothing from the lessons of Nature, and whose only sources of knowledge are the quite abnormal and artificial conditions which are "set up" in the laboratories of the authorities upon whom they blindly and helplessly depend. It seems to me necessary, therefore, not only in the interests of morals but in those of "science" also, to oppose vivisection.—Yours truly,

T. A. WILLIAMS,

Lecturer to the Bristol and West of
England Anti-vivisection Society.

Bristol, August 21st, 1897.

ANOTHER KOCHIC FIASCO.

The *Figaro* (Paris) published the following in its issue of the 16th ult.: "Dr. von Noorden has just made some experiments at the municipal hospital of Berlin on the new tuberculin of Dr. Koch. Eight consumptives, having all the conditions required by Dr. Koch in order that his remedy might be efficiently applied, were injected. Only one showed symptoms admitting of the conclusion that the tuberculin acted on his lungs, but there was no improvement in his health. With the other seven the results were various, that is, the injections were followed either by inflammation of the part injected, fever, or decrease of weight. So that the experimenting physician states in his report that considering the diversity of the results, the use of the new remedy would not be without danger in practice."

The Berlin correspondent of the *Standard* telegraphed on the 20th of August as follows: "The German *Medical Weekly* prints a number of communications from medical men who have tried Koch's new tuberculin. They are characterized by caution and scepticism, rather than enthusiasm."

The following detailed account of Koch's new failure is taken from the *British Medical Journal* of the 21st of August:—"Professor Juan L. Hohr, of Cadiz (*Anales Medicos Gaditanos*, July 15th) reports four cases treated with Koch's new tuberculin. (1) Boy, aged seven years, suffering from Pott's disease and tuberculous osteitis of the femur. There was a fistula with scanty discharge, with pain in the limb so severe as to prevent sleep, and great weakness. On April 21st 1 c.cm. of the one-five-hundredth solution, and on the 23rd 2 c.cm., were injected. The immediate result was increase of suppuration and cessation of the pain. Further injections were followed by rise of temperature, sleeplessness, and loss of appetite, and they were discontinued for two or three weeks. The treatment was then resumed, but the febrile symptoms produced were so marked and showed such persistence that it was again abandoned. The sole benefit observed in this case was the total cessation of pain. (2) A man, aged twenty-three, with pulmonary tuberculosis at both apices. Injections of the one-five-hundredth solution caused increase of cough and diminution of appetite; the febrile reaction caused by the tuberculin continued for some days after the injection. (3) A man, aged thirty-one, with tuberculous adenitis of the cervical glands and ulcers on the neck and shoulders; no chest symptoms. Injections of 1 and 2 c.cm. of the one-five-hundredth solution were followed by the development of sharp catarrh with abundant discharge and cough. The effect of the tuberculin on the diseased parts in the neck was to set up inflammation in the scars of old ulcers, which quickly broke down, exposing caseous material which was eliminated in a few days. But new points of ulceration appeared in the neck, and at the same time chest symptoms developed to such an extent that it appeared that the disease had been kindled in several foci. On the injections being discontinued the patient regained his strength, and the ulcers healed under surgical treatment. (4) A woman, aged thirty-six, suffering from superficial lupus of the nose and upper lip, which were the seat of scars; the disease was of eight years' standing. There was a fresh patch on the chin and another along the jaw. Injections (1 and 2 c.cm.) of the one-five-hundredth solution caused disappearance of the redness around the patches, but the patient complained of great weakness and pain in the limbs, and of feeling 'ill all over.' The treatment was therefore discontinued. The author's experience leads him to conclude that the new tuberculin, even in the highest degree of dilution, always causes reaction, though the intensity may vary. Koch's statements cannot, he thinks, be reconciled with clinical facts, and he considers the new tuberculin 'impossible' as a therapeutic agent."

HOME INTELLIGENCE.

EASTBOURNE.

AWARDS FOR PRIZE ESSAYS.

For several years past our hon. correspondent and valued friend, Mrs. C. H. S. Braybrooke, of Eastbourne, has, with the consent of the principal and his wife, offered prizes to the boys

attending the Eastbourne Old School, for essays on Kindness to Animals and Anti-vivisection. Materials on which to base their essays were supplied from Victoria Street, at the cost of Mrs. Braybrooke. We learn from the *Eastbourne Standard* that the annual prize-day in connection with "The Gables" (Eastbourne Old School) was held on Wednesday, July 28th, when a large number of parents and friends responded to the invitation of Mr. and Mrs. David Stroud, to witness the presentations made to the pupils who had earned their respective awards. The prizes presented by Mrs. Braybrooke, of Lillington Lodge, were awarded as follows:—First, R. Adams; second, S. Smith; third, F. Parks. First prize (for boys under 14), C. Smith; second, E. Tassell; third, W. Strange.

BUXTON.

ANNUAL MEETING OF THE LOCAL BRANCH.

Under the auspices of the Buxton Branch of the Society a very successful meeting was held in the Town Hall on Tuesday evening, July 27th, under the presidency of Mr. Herbert Philips, J.P., of Macclesfield, who was supported by the Rev. C. S. Green, Rev. A. Whympster, Rev. R. Rew, and Dr. Arnold (Manchester). There was an excellent attendance of the public, who took deep interest in the remarks of the various speakers. The proceedings opened with prayer offered by the Rev. A. Whympster.

The annual report of the Society described the work done by it since its inauguration in the winter of 1894, and recapitulated the chief points of the case against vivisection. It also recorded what had been done locally, to educate public opinion. In conclusion it stated:—"Our branch is now firmly planted, and it may be a power for good, not only in this neighbourhood, but in many different parts of the country, by enlisting the sympathy and co-operation of visitors, who may spread in their own circles a knowledge of our movement, and so help to create in other localities centres for the development of Anti-Vivisection work. . . . It behoves us, for the sake of the helpless victims, for the sake of the men who are morally degraded by participating in it, to do all that in us lies to hasten the ending of this evil practice."

The CHAIRMAN said the movement in which they were engaged was one which required courage on the part of its advocates, because they had to attack cruelty in high places, by which he meant men who tortured animals, scientists in pursuit of knowledge, men who claimed and often got distinction in high social circles and amongst men of letters. In the second place he would remind them that that movement was strong in its moral basis, and those who attached themselves to it must, if they were to do any good service, be prepared to oppose vivisection as, in Lord Shaftesbury's well-known words, "an abominable sin." The humblest and most unlearned person knew that the "torture of animals was cruel and therefore must be wrong," and they should never let go of that great standpoint. In the third place he was glad to say the movement was making steady progress. He could look back to the early days of the movement when it was extremely difficult to arouse interest in the subject, when the newspapers fought shy of it, and there seemed to be a determination to ignore it altogether, and when, if their opponents did speak of them, it was with contempt. They did not speak of them in that way now, but on the other hand there was abundant evidence they feared them. Victory could only be when vivisection was abolished without possibility of revival. Delay might be endured if only they could feel that the victory when gained would be final (applause).

Dr. ARNOLD then read an interesting paper on the cruelties of vivisection. As a medical man he protested most strongly against the practice, and urged upon his hearers to ascertain the true facts for themselves.

The address was listened to with marked attention, and at the close, votes of thanks were accorded to Dr. Arnold and to the Chairman.

READING.

A meeting in connection with the Reading Anti-Vivisection Society was held in the Greyfriars' Mission Room, Reading, on Monday evening, July 26th. The Rev. A. H. CUNNINGHAM,

who presided, referred to the recent correspondence in regard to the Prince of Wales' Hospital Fund, and said Anti-Vivisectionists naturally objected to subscribe if there was any idea that their subscriptions would be used to assist laboratories attached to hospitals in which vivisection would be carried on. The Prince of Wales gave an assurance that the funds would not be so used, and then again he had said he had satisfied himself that there were no cruelties practised. He did not say that the Prince of Wales did not speak what he thought, but there was a great deal to be looked into, and he did not think the public had that assurance to which it was entitled in respect of the infliction of cruelty.

The Rev. J. STRATTON, of Wokingham, who next spoke, said they had but a very imperfect knowledge of what was going on in the laboratories, because they could only find things out by reading the great half-crown journals of anatomy and of physiology. In these magazines could be seen papers written by vivisectionists, recording their doings. These reports of vivisection were read at the great medical meetings held in London and at other places, and only from these reports, furnished by the vivisectionists themselves, could the outside public learn how dreadfully cruel the experiments on living animals were. The Inspector under the Act only reported what the vivisectionists told him, and the vivisectionists were hardly going to tell the Inspector the experiments they had performed that would horrify the public, and so the outside world had reports put before them in such a way as to make it believe that vivisection was just a little innocent pricking with a hypodermic needle, etc. The British public were being humbugged over the matter. They were led to believe that all kinds of medical advantages were derived from vivisection and cures for all diseases. There was no guarantee whatever that the animals would be properly treated. Referring to the craze to send off to the Pasteur Institute in Paris any one who was bitten by a dog in this country, the speaker said it was only because the vivisection faculty wanted to make out that there was such great need for an Institute in this country. (Applause.)

In reply to a question, the rev. gentleman said that medical men were opposed to each other as to whether any good either to surgery or medicine had arisen from the vivisection of animals.

THE MUMBLES.

B.W.T.A. "MERCY" DEPARTMENT.

On July 7th, Miss E. F. EVANS, of Bristol, gave an address at the week-night service in the Wesleyan Chapel at The Mumbles. After singing and prayer, the pastor, the Rev. E. C. HORNE, in introducing the Lecturer, said he felt that Christians did not sufficiently consider the rights of animals, and he trusted great good would result from this meeting—the first of the sort in that district.—Miss EVANS then spoke on "Our Duty to Animals," showing that all created things have a *right* to kind and humane treatment, first because God cares for them, and also because of the services which many of them render to mankind. Did we do our duty to our "Friends of fur and feather?" How many forms of cruelty abounded, but how few voices comparatively were raised on behalf of those who could not speak for themselves? Christians ignored the Scriptural injunction, "Open thy mouth for the dumb." It was also well to remember Ruskin's saying, "He who is not actively kind is cruel." Various forms of cruelty were then dealt with—especially the crowning cruelty of all, the abominable crime of vivisection. What sort of experiments were performed was then explained, and the selfish plea that it was for human benefit, which some of the scientists asserted, while others did not so pretend. It was a duty to protest against this terrible abuse of power, and every one could do something by speaking about it and by circulating literature. If English people generally understood what went on in the vivisectional laboratories they would rise *en masse* and sweep them away.—A hearty vote of thanks was given to Miss Evans for her address, and literature was eagerly asked for by the audience. Two ministers who were present announced their intention to preach on the same subject, and two Bands of Mercy are also to be started.

THE SCOTTISH SOCIETY. MEETING AT KIRKCALDY.

Col. Waterston, Hon. Secretary, lectured in Loughborough Road United Presbyterian Church, Pathhead, Kirkcaldy, on Sunday afternoon, the 8th of August. There was a good congregation.

MEETING AT TRANENT.

On Sunday forenoon, 15th August, Col. Waterston lectured to a numerous congregation in the United Presbyterian Church, Tranent.

MEETING AT COCKENGIE.

Col. Waterston lectured in the Primitive Methodist Chapel, Cockengie, on Sunday afternoon, the 15th August, when there was a fair attendance.

Literature was freely distributed at all the above meetings.

FOREIGN INTELLIGENCE.

INDIA.

FAILURE OF HAFFKINE'S PLAGUE NOSTRUM.

Mr. Haffkine, the Russian, who has been engaged for so long in India experimenting on Her Majesty's subjects there, has confessed the failure of his nostrum at Bombay, in a letter, under his own hand, dated 18th July, and addressed to the Municipal Commissioner, Bombay. In his letter he says:—

"While I had still a limited amount of serum, I attempted on several occasions the application of the treatment to human patients. I chose for that purpose individuals in which severity of the disease did not leave hope of its yielding to the ordinary treatment, expecting that the drug would manifest its powers by assisting the physician in such cases. At no stage of my efforts could I obtain any clear results to that effect. I then resolved to prepare for the trial of this treatment a large amount of serum which would be tested in the same manner as was done in the case of diphtheria, viz. by its application to a very large number of cases—severe and mild—and by comparing the mortality amongst a similar group of patients not so treated."

While, however, he was preparing his "large amount of serum" the plague, thanks to the employment of sanitary measures, abated, as he adds:—

"In Bombay, where in the beginning neither laboratory accommodation nor the necessary staff was prepared for this kind of work, and while the largest part of our time was absorbed by investigation, and when the prophylactic treatment was worked out by Dr. Yersin's application, the present epidemic was over before the above plan could be carried out."

THE "VICTORIA HEALTH INSTITUTE."

We hear from Mr. Mehta, hon. sec. of the Bombay Anti-Vivisection Society, that the real nature and objects of the Pasteur Institute projected for India have been obscured under the above-quoted specious title. The *Indian Mirror* (14th July) commenting upon this, said:—

"It is a thousand pities that the Pasteur Institute fanatics in India should have coupled the name of the Queen with the abode of devilry and butchery which they are about to set up in this country. That is, indeed, dragging Her Majesty's name through the mire, and it is yet to be hoped that better councils will prevail with the people who have set their hearts upon such an unfortunate method of commemorating the Diamond Jubilee. We are sorry to find that Dr. Aga Khan has subscribed a lac of rupees to the project."

From the *Advocate of India* (Bombay, July 3rd) we learnt that "some nineteen Indian Chiefs are subscribing to the Victoria Pasteur Institute. Negotiations for a house at Mahasu, near Simla, have fallen through, as it is too near H.E. the Viceroy's chalet, otherwise eminently suitable."

HUNGARY.

The Society for the Prevention of Cruelty to Animals, of Budapest, has published, amongst others, the following "Native aphorisms":—

"He who can witness with indifference the suffering of a living creature, that being is a suitable ground for the development of murderous thoughts; nothing is wanting but the blast of passion to spread the seed."—COUNT ALBERT APPONYI.

"The idea of universal compassion is the indispensable basis

of all ennoblement of the soul. Where I can I protect in word and deed the S.P.C.A.—I feel thankful to every one who works in the interest of the tormented animals."—BARONESS SUTTNER.

"Let us seek by example to endeavour that our children should act with gentleness towards the animals who are confided to them. In so doing we advance the foundation of the noble sentiment of brotherly love."—DR. CHARLES VEREDY (K.C. President of the Society).

"Those who seek to spread the sublime idea of protecting the animals, struggle for humanity, civilization, and progress in the fullest sense of the word."—PROF. DR. JULIUS SZALKAY.

RUSSIA.

The current number of the *Annuaire der Thiere*, the organ of the Riga S.P.C.A., contains the annual report of the Society. It records that the delegates of the Society voted for Dr. Förster's resolution against vivisection at the Buda Pesth Congress, as did also the delegates of the only other two Russian Societies represented there. The activity of the Society shows itself chiefly in the rescue and help of animals in distress, no less than 1460 having received attention during the year, in the Home supported by the Society, 116 of these being horses and 761 dogs. The finances are in a healthy condition, and the Society maintains in every way the high standard of its work and management.

CHICAGO.

We take the following from the *Journal of Zoophily* for August:—"Our (American Anti-Vivisection Society) lecturer, Dr. Amanda M. Hale, writes that she attended lately in Chicago, the Seventeenth Annual Meeting of the Alumnae Association of her College. She was asked to make a speech, and, complying with the request, introduced the subject of vivisection. She told her auditors that, with 91 societies in the world working against it, the medical profession could not long maintain it as it is. She implored them to study the subject and consider whether vivisection ought not to be totally abolished, and urged them to lead the way in this reform rather than be driven to opposing it by public opinion. Dr. Kate Bushnell, formerly medical missionary to India, followed in an excellent speech, stating that Dr. Elizabeth Blackwell, whom she saw when she was last in England, told her of experiments such as she had never dreamed of, being made, and said that if the medical women of America did not soon move against vivisection, she should never be able to forgive them, and should be almost sorry she had ever done anything to help to open the way for them into the profession."

BOSTON (MASS.).

MR. GEO. T. ANGELL'S ADVANCE ON VIVISECTION. THE VIVISECTORS' REVENGE.

We take the following from the July issue of *Our Dumb Animals*, organ of the Massachusetts Humane Society:—

It was called to our attention that tens of thousands of dumb animals—[and perhaps hundreds of thousands]—whom we are bound to protect, were being experimented upon in *American laboratories*.

So, in behalf of our *American Humane Education Society* we paid \$250 for the best essay that could be written in the world against—and \$250 more for the best essay that could be written in favor of vivisection—and then we had them bound together, and sent them out by thousands to *all the physicians of Massachusetts*—and many elsewhere.

Then we were told that thousands of these creatures had been and were being experimented upon in our own State of Massachusetts; and we learned from an address given by *perhaps the most eminent surgeon in New England*, Dr. Henry J. Bigelow, before the Massachusetts Medical Society, that this experimentation was terribly cruel—and that no important useful fact had ever come from it by experiments in Massachusetts—and that it ought to be prohibited by law.

Then we went up to the State House and asked simply and only that some respectable physician or physicians, graduate or graduates of a reputable Massachusetts Medical College, should be permitted, in our behalf, to be present in the laboratories of these vivisectors, simply to see and inform us whether the laws of

Massachusetts for the protection of animals, which it was our duty to enforce, were being violated.

As the readers of our paper know—nothing we have ever undertaken at the State House has brought down upon us such a tremendous battle. We think every member of the Legislature was lobbied—eminent counsel were employed to fight us—pamphlets and tracts were sent out widely over our city and State—the President of Harvard University, *with a great staff of helpers*, appeared against us at the hearings, and *Harvard University paid the bills*. Not content with beating us at the State House, and shutting out any physician who might sympathize with us from admittance to any of these laboratories [*where, so far as we have been informed, there has never been discovered a single new fact of any use to humanity*], these vivisectionists have been since most earnestly at work to punish us for having dared to attempt to make an investigation—by endeavouring to prevent our Societies from receiving any more gifts to aid us in the protection of dumb animals from cruelty. It has been a great and fearful battle, but we believe with the poet, that—

"Right is right since God is God ;
And right the day must win ;
To doubt would be disloyalty,—
To falter would be sin."

GEO. T. ANGELL.

MONSIGNOR JOHN S. VAUGHAN ON VIVISECTION. AN IMPORTANT PRESS VOICE IN OUR FAVOUR.

The *Christian Commonwealth* of August 5th published the following important and outspoken editorial article under the title of "Good or Evil?"—

A book entitled "Thoughts for All Times" has made its appearance before the British reading public, the author being a dignitary of the Roman Church. The Right Reverend Monsignor John S. Vaughan's new book bears the "imprimatur" of Cardinal Vaughan. We cannot believe that the eminent head of the Roman organization in this country can have read the last chapter. For the Cardinal has gained, like many of the English Ultramontanes, a wide reputation for humanity. In "Thoughts for All Times" we find, after long and often excellent dissertations on most varied topics, that the most terrific conclusion awaits us. We have not met in the whole range of literature with a more cold-blooded vindication of vivisection. That is the topic of a long chapter, and the volume leaves the reader, if he is of at all a sympathetic temperament, quivering with astonishment and indignation. Here we have a priest enthusiastically, as well as dogmatically, maintaining that the cutting up and torture of living animals is "in the theological sense, wholly indifferent." This is startling language. It is something almost sardonically grotesque that a book whose first chapter is entitled "Infinite Love" should end with one on "Theology and Vivisection," which is a positive glorification of the pitiless system practised in numerous laboratories of different nationalities. We trust that Dr. Vaughan will live to feel sorry for this sad literary feat, and that Cardinal Vaughan will regret affixing his endorsement to it. One thing is unfortunately settled by this book, and by Cardinal Vaughan's seal of approbation. The Church of Rome smiles on the vivisectionists and makes herself their patron. So much the worse for that Church! One more nail is thus driven into the coffin of a hierarchy which has always sat complacently smiling on mercilessness.

For some years one brave little London journal has persistently waged war on vivisection. We regard our contemporary, the evening *Echo*, as entitled almost alone to whatever credit is due to the daily Press for help rendered to the earnest anti-vivisectionists. The *Echo* is heroically solitary in its attitude amongst secular journals, and one of its loudest complaints is against religious organs and against the clergy and the churches for their callous indifference in view of the barbarities constantly exposed. Unfortunately the public intelligence is hopelessly bewildered by two conflicting presentations. The mystification of the kind-hearted Heir to the Throne is a proof of this chaos of sentiment. Years ago the *Spectator* was stirred to emphatic expressions of indignation over the cruelty positively asserted, of experiments on dogs. Now, one of the presentations of facts has always been that the amount of pain

inflicted on helpless animals was "wholly insignificant," or "scarcely involved any appreciable suffering." This is according to the reports of inspectors, who are much addicted to mentioning trivial experiments on rabbits, mice, and frogs, but are exceedingly reticent about the treatment in the torture-trough of dogs, cats, monkeys, or horses. But a very different presentation is furnished by the scientific papers. The operations described by these, in the coolest manner, are so unspeakably horrible that we do not propose to reproduce the terror in any degree in the minds of our readers by detailing accounts of them. That Roman Catholic writers should stoutly advocate this new Inquisition on helpless animals is, perhaps, not so strange, seeing that Jesuits and Ultramontanes have lost the luxury of that human Inquisition whose ghastly instruments are on show every day in the old museums at the Hague, Nuremberg, etc.

Most deliberately Monsignor Vaughan takes up the heartless theory that animals have no rights. But it is not long since his predecessors maintained with axe and faggot and rack that "heretics" had no rights, except to be vivisected. A specimen of the style of this dialectic may be given in the following paragraph:—

"If our Divine Lord," says Monsignor Vaughan, "were living visibly upon earth in these days, even He would scarcely escape prosecution at the hands of the anti-vivisectionists' society. Indeed, the indignation of mere enthusiastic members, were they, in this year of grace, 1896, to witness the scene narrated in St. Mark's Gospel, may be more easily imagined than described. There was near the mountain a great herd of swine feeding. And the (evil) spirits besought Jesus, saying: Send us into the swine, that we may enter into them. And immediately Jesus gave them leave!—thereby inoculating, as it were, the beasts—the poor dear little innocent piggies!—with the devilish virus, in order to save the possessed human beings."

We do not imagine that the vivisectionists will themselves profoundly admire or ardently thank the author for this grotesque exhibition of his logical acumen.

There lately died at Geneva a vivisector, Professor Schiff, who carried on operations on a very great scale, 700 dogs being supposed to fall victims to him in one year, whose organs of voice he destroyed that his neighbours might not be disturbed by howlings. This gentleman was the recipient of a prize awarded by our own Royal College of Physicians. After this it is useless for any extenuators to plead that cruelty practised on the Continent is not endorsed in England. Barbarity in the laboratory is no foreign vice. That rabbits and cats are baked alive is simply a fact recorded by Dr. Lauder Brunton with respect to his series of experiments. Claude Bernard, the famous French vivisector, who sacrificed countless thousands of animals, at the close of a long life spent in torturing helpless animals, could only say when asked about results, "Our hands are empty, but our mouths are full of promises." We are ashamed of human nature when we have to record how, in his devil's own cookery book, this fiendish experimenter gives full and minute details of baking dogs, pigeons, rabbits, together with pictures of stoves with fires under and animals in the ovens for baking like a pie or a cake! And yet the Prince of Wales was recently lured into delivering a verdict on vivisectionists and their work, which seemed to lull the British public conscience into the idea that vivisection is a humane, laudable, and essential system! We are sorry for a public so easily gulled, for an illustrious leader of society so easily deceived, and for a profession so hopelessly callous to the evidence of inhumanity practised by great numbers of its members in different countries. We now ask a question often asked before, but always shirked. How far are those allegations true which have been put forth by such authorities as Dr. Berdoo that vivisection is practised in the laboratories connected with some of the London hospitals? We put this query all the more anxiously, in the light of a statement by that great authority, Mr. Lawson Tait, that vivisection has been an injury, not a help to professional study. This distinguished surgeon actually goes on to say that "instead of vivisection having in any way advanced abdominal surgery, it has on the contrary retarded it."

SOLON was asked, "How can wrong doing be avoided in the State?" The answer was, "By those who are not wronged feeling the same indignation at it as those who are."

The Victoria Street and International Anti-Vivisection Society.

AFFILIATED SOCIETIES AND BRANCHES.

BRISTOL AND WEST OF ENGLAND:
President, JOSEPH STORRS FRY, Esq.
Hon. Sec., Mrs. ROSCOE, Crete Hill, Westbury-on-Trym.
Sec., Miss FLORENCE BAKER, 20, The Triangle.

BEDMINSTER:
Hon. Sec., Miss EVANS, Stackpool Road.

BIRMINGHAM:
WORKING MEN'S SOCIETY:
Hon. Sec., Mr. HERBERT H. ASTON, 45, Bourne Road, Aston.
MOSELEY AND KING'S HEATH BRANCH:
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M. PASTEUR'S QUADRUPLE HECATOMB.

91

THE TALE OF THE 366 DEAD.

[CORRECTED TO AUGUST 26TH, 1897.]

IMPORTANT TESTIMONY AS TO THE ACCURACY OF THESE STATISTICS.

Q. 2057.—Was this supplement to THE ZOOPHILIST of 21st [1st] July, 1887, giving details as to M. Pasteur's Necrology, before you when you were on the Pasteur Commission (handing the same to the witness)?—Yes, I think we had this statement before us.

Q. 2058.—Do you know whether it is accurate?—I believe it is; it seems to me to have been drawn up with great care.—Extracted from the Evidence of Dr. Lauder Brunton—Report of Lords' Committee on Rabies in Dogs, 1887.

N.B.—It has been claimed on behalf of Pasteur that on dogs the success of his method was invariable. Had the analogy between dogs and mankind, therefore, been perfect, it should never have failed with the latter. It does fail, and so the experimental basis is discredited; but it is sought to rehabilitate it by saying that the average mortality is small. When persons bitten by dogs only suspected of being mad, and even those merely licked by dogs, are reckoned among the total treated, and a good many actual deaths are discounted, it is easy to make a low average. The honesty of the process is, however, another matter.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
INOCULATED IN PARIS.				1885:	1885:	1885:	1885:
1	Jacques Bonenfant...	Hospital Lariboisière, Paris	Dog	Aug. 30	Sept. 1	Sept. 7	<i>Journal de Médecine de Paris</i> , December 19 (1886.)
2	Louise Pelletier	Paris	Dog	Oct. 3	Nov. 9	Dec. 4	<i>Intransigeant</i> , December 8.
				1886:	1886:	1886:	1886:
3	Mathias Kakulev (or Kajoronoff)	Russia	Wolf	Mar. 1	Mar. 13	Mar. 23	Died at Hotel Dieu, Paris; <i>La France</i> , March 24
4	Wladimir Phenogenoff (or Ivanoff)	Russia	Wolf	Mar. 1	Mar. 13	April 3	Died at Hotel Dieu, Paris; <i>Evénement</i> , April 4.
5	Peter Wasiliev Golowinski	Russia	Wolf	Mar. 1	Mar. 13	April 7	Died at Hotel Dieu, Paris; <i>Intransigeant</i> , April 18.
6	Dimitri Borowskoff...	Russia	Wolf	Mar. 25	April 5	April 20	Died in Paris; <i>Intransigeant</i> , April 22.
7	Ivanovna Schtcherbakoff	Russia	Wolf	Mar. 25	April 5	April 22	Died at Salpêtrière, Paris; <i>Petit Journal</i> , April 25.
8	A Woman (name unknown)	Wloekaveck, Russia	Wolf	...	...	May 31	<i>Ami du Peuple</i> , June 6.
9	(Name unknown)	Russia	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
10	(Name unknown)	Russia (at Moscow)	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
11	Christin (aged 6)	Evian, Savoy	Dog	May 14	May 20	July 4	<i>Journal de Médecine de Paris</i> , July 18.
12	John Gagu (or Gager)	Roumania	Dog	May 11	May 25	June 7	<i>Daily News</i> , June 7.
13	(¹) Eloina Lagut (aged 11)	Dole, Jura	Dog	May 18	May 24	June 17	Exchange Company's Telegram, June 24.
14	A Woman (name unknown)	Russia	Wolf	...	...	July 6	<i>Lancet</i> , July 31.
15	(Name unknown)	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Under
16	(Name unknown)	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Dr. Winow's
17	(Name unknown)	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } care.
18	Marius Bouvier (adult)	Grenoble	Cat	Apr. 30	May 4	July 21	<i>Le Temps</i> , Paris, July 22—25.
19	A Boy (aged 13)	Dordrecht	Cat	June 18	June 25	Aug. 4	<i>Daily News</i> , August 10. (Paris correspondence.)
20	(¹) Peytel, Henri (aged 6)	Poleymieux, Rhone	Dog	June 28	June 30	July 17	<i>Le Petit Lyonnais</i> , August.
21	A Young Man	Gatchina	Dog	...	...	Aug. 10	<i>Novoé Vremya</i> , Russian Journal, August 11.
22	(¹) Bergeron Clédière (21 mos.)	Bordeaux	Dog	June 17	June 21	Aug. 17	<i>Daily News</i> , August 18. (Paris correspondence.)
23	Josefa Pinta Santiago	Ferrol, Spain	Dog	...	...	Aug. 16	<i>Le Matin</i> , Paris, August 18.
24	A young woman (aged 14)	Reus, Spain	Dog	July 5	...	Aug. 20	Madrid correspondence, based on <i>La Epoca</i> .
25	Harry Collinge (aged 10)	Rawtenstall, Lancs.	Dog	July 6	July 15	Aug. 20	Manchester and London Journals, August 23.
26-8	Three Patients	Spain	Dog	...	...	Sept.	<i>Correspondancia</i> , Madrid, Sept.
29	(¹) Moulis Andre (6 years)	Paris	Dog	July 31	Aug. 6	Sept. 8	<i>Journal de Médecine de Paris</i> , November 7.
30	Zélie Leduc (70)	...	Dog	July 14	July 18	Sept. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
31	Louis Grand (41)	France	Dog	Sept. 5	Sept. 14	Oct. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
32	Duresset, Ed.	France	Dog	Aug.	Sept.	Sept.	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
33	(¹) Astier (2 years)	Paris	Dog	Aug. 4	Aug. 5	Sept. 16	<i>Journal de Médecine de Paris</i> , November 7.
34	Mathieu Videau (3 years)	Villeneuve-d'Ornon	Dog	Feb. 24	Feb. 27	Sept. 24	<i>Le Temps</i> , Paris, October 2.
35	(²) Moermann, a Gamekeeper	Sarthe	Dog	June 28	Aug. 11	Sept. 7	<i>Le Patriote</i> , Brussels, September 14.
36	(Name unknown) Bitten by a dog the property of Prince	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } Admitted
37	(Name unknown)	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } by Dr. Chau-
38	(Name unknown)	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } temps, Sor-
39	(Name unknown) de Lucinge	(Vendée	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } Oct. 10, 1886.
40	(¹) Magneron Norbert (18)	Talence, Bordeaux	Dog	July 25	Aug. 1	Oct. 12	<i>La Science Libre</i> , Paris, October 24.
41	Amélie Ozimska	Holbiele, Vladimir (Russia)	Dog	May	10th day	Feb., 1887	<i>Courrier de Varsovie</i> , February 17, 1887.
INOCULATED AT THE PASTEUR INSTITUTE, ODESSA.							
42	Miroslaff Panoff (14)	Odessa	...	...	...	Within four mths.	} <i>Novoé Vremya</i> , September 14.
43	Tissenko (10)	Odessa	...	...	...	...
44	Jean Nowogiloff (12)	Odessa	...	...	...	...
45	(Name unknown)	Inhabitants of {	...	...	...	Within 4 mths.	} <i>Novoé Vremya</i> , September 14.
46	(Name unknown)	Kostroma {	...	...	...	...
47	A Peasant, name unknown. (64)	Odessa	Wolf	...	...	July 7	
48	Tyjneuh	Son Station-master, Lioubotinn	Dog	July 4	July 10	Aug 14	<i>La Semaine Médicale</i> (quoted in <i>Lancet</i> , August 21). <i>Journal de Médecine de Paris</i> , November 14.

(¹) Admitted by M. Pasteur or Dr. Chantemps. *Journal de Médecine de Paris*, November 7.)

(²) Jamin, another man bitten by the same dog, but not inoculated, also died.—

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1886:	1886:
49	Paul Potaïkin (7) ...	Odessa ...	Dog	June 27	June 30	Aug 15	} <i>Journal de Médecine de Paris</i> , October 17, and } <i>Intransigent</i> , October 13. } <i>Daily News</i> , Odessa Correspondent, November 2. } <i>Journal de Médecine de Paris</i> , November 7. } <i>Novoï Vremya</i> and <i>Sciences Libre</i> , November 7. } Dr. Kessler, St. Petersburg.
50	Vassa Voropaïef (16) ...	Odessa ...	Dog	June 27	June 30	Aug 22	
51	Mirochwichenko ...	Kharkoff ...	Dog	June 20	June 28	Aug. 3	
52	Ilyinski ...	Odessa ...	Dog	July 7	July 7	Aug. 20	
53	Bolodinn (Simon) ...	Gagarinn ...	Wolf	June	June	Oct. 12	
54	Kushejow (peasant) ...	Odessa ...	...	...	July 15	Oct. 12	
55	Anastasia Bretschkow ...	Odessa ...	...	...	{ 4 days after bite }		Dr. Kessler, St. Petersburg.
56	Popow ...	Belgorod ...	...	...	...	...	Dr. Kessler, St. Petersburg.
				1887:	1887:	1887:	1887:
57	Man (25) ...	Oster (Tscherni-gov) ...	Wolf	...	...	...	{ Submitted to the Intensive Treatment.— <i>Journal de Médecine de Paris</i> , August 28, 1887. } <i>Daily News</i> , Aug. 30; from its Odessa Correspondent. } <i>Daily News</i> , August 30; from its Odessa Correspondent. } <i>Daily News</i> , September 12; from its Odessa Correspondent.
58	Child (10) ...						
59	A Man (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
60	A Boy (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
61	A Boy (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
62	— (name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	
63	— (name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	
64	A Girl (12, name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	
				1888:	1888:	1888:	1888:
65	Maxime Schilla ...	Sebastopol (near) ...	Dog	March	March	March	<i>Novoï Vremya</i> , March 27th.
66	Nasar Ossatschenko ...	Odessa ...	Dog	...	...	July	<i>La Paix</i> , Paris, July.
				1889:	1889:	1889:	1889:
67	Anton Monastersky ...	Kieff ...	Dog	May	May	May	<i>Odessa Zeitung</i> , June 2.
	INOCULATED ELSEWHERE IN RUSSIA.			1886:	1886:	1886:	1886:
68	Arthur Stoboi (boy) ...	Lublin ...	Dog	July	August	Nov. 23	<i>Riga Tageblatt</i> , December 21, 1886. The dog lived and appeared to be perfectly healthy.
69	Wassilieff (peasant) ...	Jakhnov (Pskow) ...	Dog	...	...	...	Inoculated at St. Petersburg.— <i>Journal de Médecine de Paris</i> , March 13, 1887.
				1887:	1887:	1887:	1887:
70	— (peasant, 28) ...	Pavlovo ...	Dog	Feb. 24	Mar. 4	Mar. 20	Dr. S. Warschawski, in <i>Russkaja Medicina</i> .
71	A Peasant (name unknown) ...	Kromy ...	Dog	July 25	July 26	Sept. 20	This peasant died of paralytic rabies, contracted at laboratory.— <i>Journal de Médecine de Paris</i> , Oct. 23.
72	A man (name unknown) ...	Circassia ...	Wolf	Aug. 1	Aug. 7	Sept.	{ <i>Journal de Médecine de Paris</i> , October 23.
73	A Child (name unknown) ...	Circassia ...	Wolf	Aug. 1	...	Sept.	
74	A Child (name unknown) ...	Circassia ...	Wolf	Aug. 1	...	Sept.	
				1889:	1889:	1889:	1889:
75	(¹) W—, Helen (6) ...	Biela (Sjediz) ...	Dog	July 15	July 15	Aug. 9	Dr. Rodkewitsch, in <i>Russkaja Medicina</i> , September.
	Submitted to the Intensive Treatment.			1886:	1886:	1886:	1886:
76	Joseph Goffi, alias Smith (26) ...	Brown Institution, London ...	Cat	Sept. 4	Sept. 6	Oct. 20	"His death was due to the virus of rabies."— <i>Report of Committee to Local Gov. Board</i> , 1887, p. vi.
77	Rovati, Luigi (30) ...	Modena ...	Dog	Sep. 12	Sep. 20	Oct. 23	<i>Journal de Médecine de Paris</i> , March 13 (1887).
78	(*) Clergeot-Moulin (27) ...	Paris ...	Dog	Aug. 7	Aug. 11	Oct. 24	Died at the Tenon Hospital, Paris.
79	Edward, cabman (34) ...	Versailles ...	Dog	...	...	Oct. 30	<i>Le Science Libre</i> , Paris, November 14.
80	(*) Wilde, Arthur ...	Rotherham ...	Man	...	...	Nov. 3	<i>Rotherham Advertiser</i> , November 6.
81	Sodini, B. (46) ...	Constantine ...	Dog	Oct. 12	Oct. 21	Nov. 24	Professor Peter (<i>Lancet</i> , January 15, 1887).
82	Rouyer, Arthur (12) ...	58, Rue de Bretagne, Paris ...	Dog	Oct. 20	Oct. 21	Nov. 26	<i>Journal de Médecine de Paris</i> , December 5, 1886.
83	Letang, père ...	Gourgeon ...	Dog	Nov. 3	Nov. 8	Dec. 8	Professor Peter (Letter to, from Dr. Pitoy).
84	Réveillac, Louis (20) ...	France ...	Dog	Nov. 4	Nov. 6	Dec. 21	<i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887.
85	(*) Née, Leopold (42) ...	Arras ...	Dog	Nov. 12	Nov. 17	Dec. 17	<i>Journal de Médecine de Paris</i> , January 2, 1887.
					1887:	1887:	1887:
86	Jansen, Louis Victor (47) ...	Dunkirk ...	Dog	Aug. 19	Aug. 21	Jan. 1	Professor Peter (<i>Lancet</i> , January 15).
87	Gérard, Amédée (28) ...	Boran (Oise) ...	Dog	Dec. 1	Dec. 3	Jan. 3	Professor Peter (Letter to, from Medical Attendant).
88	Goriot, Paul (14) ...	Paris ...	Cat	Nov. 30	Dec. 21	Jan. 15	Drs. Boisson & Daugats. <i>Journal de Médecine</i> , Jan. 30.
89	Albert (woman) ...	Vallouise (Basses Alpes) ...	Dog	Dec. 20	Dec. 25	Jan. 5	Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
90	Fonlup (30) ...	Tour du Pin (Isère) ...	Dog	Dec. 1	Dec. 12	Jan. 24	<i>Journal de Médecine de Paris</i> , February 6.
91	Bergé (40) ...	Bordeaux ...	Dog	July	{ 3 days after bite }		Dr. Pitres made the autopsy and declared that the man died of hydrophobia. <i>Journal de Médecine de Paris</i> , February 6.
92	Alphand (woman, 42) ...	Madeleine (Paris) ...	Dog	Dec. 13	Dec. 20	Jan. 30	<i>Journal de Médecine de Paris</i> , March 13.
93	Saintes (child) ...	Maison-Carrée, near Alger ...	Dog	...	...	Feb. 24	<i>Journal de Médecine de Paris</i> , March 13.
94	Chavagnac, Louise (13) ...	Arbe ...	Dog	Oct.	Oct.	Mar. 10	<i>Journal de Médecine de Paris</i> , March 20 and July 31.

[NOTE.—The intensive method is abandoned about May or June, 1887.]

(¹) Other children bitten by the same dog, and not inoculated, survive; the dog disappeared. (*) Admitted by M. Pasteur or Dr. Chautemps. (*) Dr. J. H. Clarke's Opinion on Facts as reported: Death not due to hydrophobia, but probably to Pasteur's inoculations, the symptoms not being those of any known disease. (*) The dog in this case was pronounced not to have been mad.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1887 :	1887 :	1887 :	1887 :
95	Sans Ramon ...	[Spain] La Siréna, Badajoz,	Wolf	Feb. 15	Mar. 15	Mar. 20	Dr. Dujardin-Beaumetz. [Died under treatment.]
96	(¹) Ballasteros ...	La Puerta, Prov. of Jena, Spain...	Dog	Feb. 9	Feb. 20	Mar. 24	
97	A person (no name given)...	Navas de San Juan (Jena), Spain ...	Dog	...	...	Mar. 26	<i>El Resumen</i> , a Spanish journal, quoted in <i>Journal de Médecine de Paris</i> , April 24.
98	(¹) A woman (41) ...	Baeza, Spain ...	Dog	...	...	Apr. 23	
99	Ph. Hydram (56) ...	Sallèle, France ...	Dog	Oct. 5	Oct. 10	Apr. 17	<i>Lancet</i> , June 4, Paris Correspondence.
100	J. Hayden (8) ...	Thurles, Ireland...	Dog	Apr. 16	Apr. 19	May 19	<i>Lancet</i> , June 4, and <i>Freeman's Journal</i> , Dublin, May 27.
101	Valentin, Emile (16)	Reherry (France) ...	Dog	Feb. 22	Feb. 28	July 27	<i>Progrès de l'Est</i> , quoted in <i>Journal de Médecine de Paris</i> , September 11.
102	Pénichaud (18) ...	Poulaines (Indre), France ...	Dog	June 12	June 14	Aug. 19	Dr. Brethéan (Valençay, Indre), in <i>Journal de Médecine de Paris</i> , September 4.
Under the Third Formula.							
103	Hurot, Paul (42) ...	Rue St. Bernard, Paris ...	Dog	May 29	May 30	July 4	<i>Figaro</i> , Paris, July 5.
104	Gachet, Jean Baptiste (25)	Vierzon (Cher) ...	Dog	Apr. 4	Apr. 10	May 2	Dr. Lutaud, Editor <i>Journal de Médecine de Paris</i> . Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
105	Cipriano, Rosario (42)	Torretta, Sicily ...	Dog	Mar. 13	Mar. 18	May 7	
106	Bourgeot, Jules ...	Audigny (Aisne) ...	Dog	Apr. 24	Apr. 28	July 11	Dr. Peter's Speech, Academy of Medicine, July 12.
107	Mangione, Andrea (82)	Palermo, Sicily ...	Dog	May 24	June 4	July 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
108	Desclide (aubergiste)	Larochehoucauld (Charente) ...	Dog	May 22	May 23	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by Dr. Nadaud.)
109	Jenle, Jeanne M. (57)	Arcezac (Hautes-Pyrénées) ...	Dog	Mar. 27	Mar. 29	July 21	<i>Journal de Médecine de Paris</i> , July 31. (Supported by M. Courrèges.)
110	Cahill, Martin (29)...	Templemore, Ireland	Dog	June 14	June 27	Aug. 14	<i>Standard</i> (and other London papers), August 18.
111	(*) Doneraile, Lord (69)	Doneraile Court, co. Cork, Ireland	Fox	Jan. 14	Jan. 26	Aug. 26	<i>Times</i> , August 27. <i>Journal de Médecine de Paris</i> , September 4.
112	Kirkham, Albert E. (5)	Lancaster ...	Dog	July 18	July 26	Aug. 27	<i>Daily Telegraph</i> , August 30. <i>Lancet</i> , June 16, 1888.
113	Cagarelli, Anna ...	Fiorano, Province of Modena ...	Dog	June 13	June 20	Sept. 12	<i>Roma</i> , Neapolitan newspaper, Sept. 17 (confirmed by letter from the Syndic of Fiorano, October 5).
114	(Name unknown) ...	Portugal ...	Wolf	...	...	About Sept. 20	<i>Daily Chronicle</i> , London, September 23; from its Paris Correspondent. [The patients were treated in Paris.]
115	(Name unknown) ...	Portugal ...	Wolf	...	...
116	(Name unknown) ...	Portugal ...	Wolf	...	...	Sept. 21	<i>Weekly Dispatch</i> , September 25; <i>Tablet</i> , October 8.
117	Padre Luiz ...	Cabanos, Portugal	Wolf	July 5	Aug. 2		
118	(Name unknown) ...	Portugal ...	Wolf	...	...	...	The <i>Commercio Portugues</i> , quoted in <i>Journal de Médecine de Paris</i> , October 23.
119	(Name unknown) ...	Portugal ...	Wolf	...	...
120	(Name unknown) ...	Portugal ...	Wolf	...	...	...	Dr. Hallade, in <i>Journal de Médecine de Paris</i> , Oct. 2.
121	(Name unknown) ...	Portugal ...	Wolf	...	...
122	Jammot (woman, 38)	La Garenne ...	Cat	Aug. 3	Aug. 4	Sept. 24	<i>Manchester Guardian</i> , October 5; also, <i>British Medical Journal</i> , October 15.
123	(*) Lindley, Fred. (26)	Cumberworth, Huddersfield ...	Dog	Aug. 1	Aug. 6	Oct. 4	
124	Saulat, Georgette (5 years)	35, Rue de Chau-fourniers, Paris	Dog	July 9	July 9	Aug. 4	<i>Journal de Médecine de Paris</i> , October 23.
125	Marchois (8 years)	Senlis ...	Dog	July 3	July 5	Aug. 16	<i>Journal de Médecine de Paris</i> , October 23.
126	Pliego, Joseph ...	Portugal ...	...	July	Aug.	Aug. 30	<i>Journal de Médecine de Paris</i> , October 23.
127	Palu, Eugénie (8) ...	Codalet, France ...	Dog	Sept. 1	Sept. 6	Oct. 10	<i>Journal de Médecine de Paris</i> , November 6.
128	Thierry, Paul (4) ...	Melleville, France	Dog	Sept. 1	Sept. 7	Oct. 15	<i>Journal de Médecine de Paris</i> , November 6.
129	Sintés, Edward (child)	Hussein-Dey (Algeria)	Dog	Jan. 19	Jan. 25	Oct. 17	<i>Intransigent</i> , Paris, Nov. 21. [Inoculated in Paris.]
130	Cauvy, Dr. ...	Béziers, France ...	Dog	Sept. 30	Oct.	Nov. 3	<i>Journal de Médecine de Paris</i> , November 13.
131	(*) Vial, Rose (70) ...	Arles, France ...	Dog	Aug. 29	Sept. 5	Oct. 3	<i>Journal de Médecine de Paris</i> , December 11.
132	Valla ...	Salettes ...	Dog	Nov. 8	Nov. 13	Dec. 20	<i>Semaine Médicale</i> , February 1, 1888.
133-8	Six persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
39-40	Two persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
1888 :							
141	Boy (4 yrs., name unknown)	Paris ...	Dog	Dec. 6	Dec. 12	Jan. 22	<i>Medical Press</i> , London, March 21.
142	Woman (52, name unknown)	Paris ...	Dog	Jan. 23	Jan. 29	Feb. 17	<i>Medical Press</i> , London, March 21.
143	Sidi-ben-Isral ...	Algeria ...	Dog	...	...	Mar. 18	<i>Echo</i> , London, March 19. (Death occurred at the Cochin Hospital.)
144	Marinot, Alphonse (soldier)	Paris ...	Dog	Feb. 15	Feb. 15	Apr. 1	<i>Journal de Médecine de Paris</i> , April 22.
145	S— (54, farrier) ...	Paris ...	Dog	Nov. 9	Nov. 11	Apr. 3	<i>Journal de Médecine de Paris</i> , April 22.
146	Denis, Cotte (28) ..	Thiers (Puy-de-Dôme) ...	Dog	...	Mar. 6	Apr. 12	<i>Moniteur du Puy de Dôme</i> , April 12.
147	Child (6½ years) ...	Paris ...	Dog	April	April	April	Dr. Dujardin-Beaumetz.— <i>Le Temps</i> , Paris, May 4.
148	Poulet, M. (20) ...	Pecq, near Paris	Dog	Dec. 6	Dec. 8	May 16	<i>La Paix</i> , Paris, July.
1888 :							
149	Avray, Paul (11) ...	[(Rouen)] Boisguillaume	Dog	Apr. 12	Apr. 17	May 29	<i>Le Petit Journal</i> , Paris, May 31.
150	Olin, Eugene ...	Rue Curial, Paris	Dog	Apr. 23	Apr. 26	June 17	<i>Annales de l'Institut Pasteur</i> , Paris, July 25.
151	(*) Bertin (child, 18 months)	Gentilly ...	Dog	May 15	May 17	June 20	<i>L'Intransigent</i> , Paris, September 10.
152	Villemain, P. (31 months)	Marseilles ...	Dog	May 9	May 14	June 23	<i>Lancet</i> (Paris correspondence), September 15.
153	Labeaume (37, labourer)	Châtenay ...	Cat	May 29	May 30	July 6	<i>Lancet</i> (Paris correspondence), September 15.
154	A man (name unknown, 28)	France ...	Dog	Dec. '87	Dec. '87	July 1	<i>Medical Press</i> , July 11.
155	Ducos, Mathieu (28) ...	St. Jean de Bonne-fond (Loire) ...	Cat	June 16	June 20	July 18	<i>L'Intransigent</i> , Paris, September 10.

(¹) Each died four days after the return from Paris.—(*Journal de Médecine de Paris*, January 2, 1887.) (²) M. Pasteur has stated that Lord Doneraile was not treated under the intensive method. (³) No clinical or experimental proof that the animal was affected with rabies has been produced.—(*Journal de Médecine de Paris*, December 11, 1887.) (⁴) See No. 265; the two Lindleys were brothers and inoculated together. (⁵) This and several following cases are admitted by M. Pasteur, and the details have been revised from the official "Annals" of his Institute.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1888:	1888:
156	Sinardet, Alphonse (26) ...	Polliot (Ain) ...	Dog	April 26	May 3	July 28	<i>Annales de l'Institut Pasteur</i> , September 25.
				1888:	1888:		
157	Mesnil, L. (44) ...	Châtenay ...	Cat	Mar. 25	Mar. 26	July 30	<i>L'Intransigeant</i> , Paris, September 10.
158	Sarasin, Mdme. (44) ...	St. Maurice, Switzerland ...	Dog	July 1	July 4	Aug. 4	<i>L'Intransigeant</i> , Paris, September 10.
159	Guers, Joseph (27) ...	Chelles (Seine-et-Marne) ...	Dog	July 13	July 16	Aug. 8	<i>L'Intransigeant</i> , Paris, September 10.
160	N — (name unknown) ...	... ..	Dog	July 15	July 16	Aug. 20	Dr. Levraud (<i>Journal de Médecine de Paris</i> , Nov. 18).
161	Bacchi, Emilia (22) ...	Lercara, Sicily ...	Dog	July 19	July 20	Sept. 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
162	Couzinier, Jean (65) ...	Courbevoie (Seine) ...	Dog	Sept. 12	Sept. 12	Oct. 14	<i>Annales de l'Institut Pasteur</i> , October 25.
163	Bourelly, Leon (14) ...	Marseilles ...	Dog	May 27	June 7	Nov. 2	<i>Annales de l'Institut Pasteur</i> , November 25.
164	Ricciola, Antonia (3½) ...	Palermo ...	Dog	Nov. 29	Dec. 3	Dec. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
165	Child (name unknown) ...	Rio de Janeiro ...	Dog	...	...	23rd day	<i>Medical Press</i> , December 26.
166	One person ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
167-8	Two persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
				1889:	1889:		1889:
169	(1) Mayland, Rose (3) ...	[Inférieure] Belbeuf (Seine-Pyrenees-Orientales) ...	Dog	Dec. 13	Dec. 15	Jan. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
170	X — (19) ...	Peyrestortes (Pyrenees-Orientales) ...	Dog	Dec. 8	Dec. 9	Jan. 9	<i>Journal de Médecine de Paris</i> , February 17.
171	(1) Allègre, Louis (14) ...	Cambes (Gironde) ...	Dog	Dec. 25	Dec. 28	Jan. 14	<i>Annales de l'Institut Pasteur</i> , January 25.
172	Palmeri, Melchiorre (18) ...	Calatafimi, Sicily ...	Dog	Nov. 30	Dec. 1	Jan. 20	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
173	Druant, Blanche (16) ...	Lariboisière, Paris	Dog	Dec. 25	Dec. 26	Feb. 8	<i>Journal de Médecine de Paris</i> , February 24.
				1889:	1889:		
174	Druaux, B. (15) ...	Aubervilliers ...	Dog	Jan. 7	Jan. 9	Feb. 11	<i>Lancet</i> , March 16.
				1888:	1888:		
175	J. L. Dufour (72) ...	Veyras ...	Dog	Dec. 23	Dec. 25	Feb. 13	<i>Lancet</i> , March 16.
				1889:	1889:		
176	Arenés, Gilles (50) ...	Soler (Pyrenees-Orientales) ...	Dog	Jan. 26	Jan. 29	Feb. 24	<i>Annales de l'Institut Pasteur</i> , March 25.
				1888:	1888:		
177	Rey, Ernest ...	Oissel ...	Dog	Dec. 13	Dec. 17	Mar. 4	<i>Lancet</i> , March 23.
				1889:	1889:		
178	An Italian Child ...	Cairo ...	Dog	Feb. 4	Feb. 9	Mar. 5	<i>British Medical Journal</i> , May 11. [Treated at Naples]
179	Mahout, Ed. (8) ...	Levallois - Perret (Seine) ...	Dog	Jan. 31	Feb. 3	Mar. 9	<i>Annales de l'Institut Pasteur</i> , March 25.
180	(2) Rascol, Pierre (52) ...	Murat (Tarn) ..	Dog	Feb. 28	Mar. 9	Apr. 14	<i>Journal de Médecine de Paris</i> , October 13.
				1887:	1887:		
181	Moens, Henri (24) ...	Anvers (Belgium)	Dog	Mar. 2	Mar. 7	May 17	<i>Annales de l'Institut Pasteur</i> , June 25.
		[du Nord]		1889:	1889:		
182	Maillot, Mdme. (86) ...	Coatascorn (Cotes-Newry, Ireland ...	Dog	April 27	May 3	June 2	<i>Annales de l'Institut Pasteur</i> , June 25.
183	Waleley, Patrick (7) ...	Noyarey, Grenoble	Dog	May 3	May 20	June 13	<i>Annales de l'Institut Pasteur</i> , July 25.
184	(1) Coudurier, Gustave (7) ...	Milan ...	Dog	June 9	June 15	June 24	<i>Ibid.</i>
185	A Child (name unknown) ...	Milan ...	Dog	May	May	June	[This and the four preceding cases were treated at the Institute of Dr. Bareggi, of Milan.]
186	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
187	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
188	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
189	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
190	Valli, Romeo (11) ...	Milan ...	Dog	May 30	May 31	June 27	<i>Il Secolo</i> , of Milan, June 27.
191	Bulli, G. (child) ...	Milan ...	Dog	May 30	May 31	June 28	<i>Il Secolo</i> , of Milan, June 28.
192	Lurashi, Rosa (14) ...	... ..	Dog	June 10	June 11	June 28	<i>Il Secolo</i> , of Milan, June 30.
193	Trottet, G. (13) ...	Paris ...	Dog	May 23	May 25	July 14	<i>Journal de Médecine de Paris</i> , July 28.
194	Gilbert, Prosper (11) ...	Brussels ...	Dog	June 18	June 24	Aug. 1	<i>Annales de l'Institut Pasteur</i> , August 25.
195	Claudel, M. ...	Nancy, France ...	Dog	July 8	July 19	Aug. 6	<i>Journal de Médecine de Paris</i> , October 6.
196	Sottiaux, J. B. (54) ...	Bougival (Seine-et-Oise) ...	Dog	July 5	July 5	Aug. 13	<i>Annales de l'Institut Pasteur</i> , August 25.
				1887:	1887:		
197	Manuel, José (6) ...	Asteazu (Spain) ...	Dog	June 30	July 9	Aug. 29	<i>Annales de l'Institut Pasteur</i> , October 25.
198	Auroux, Gilbert ...	Néris-les-Bains ...	Dog	July 7	July 9	Aug. 19	M. Boissier, <i>Journal de Médecine de Paris</i> , Aug. 35.
199	Yorke, Claude James (7) ...	Ch. Fenton, Yorks.	Dog	Aug. 5	Aug. 9	Aug. 31	<i>Yorkshire Post</i> , September 5.
200	Bia, Albert (boy) ...	Sala Braganza ...	Dog	Nov. 4	Nov. 5	Nov. 24	<i>Secolo</i> , Milan, November 25.
201-2	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
203	One person ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
				1890:	1890:		1890:
204	Monastirska, A. (6) ...	Charkow, Russia ...	Dog	Jan. 27	Jan. 29	Feb. 28	Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
205	Malikyna, Acouline (17) ...	Charkow, Russia ...	Dog	June 23	July 1	July 24	
206	Garbounoff, Matrena (50) ...	Charkow, Russia ...	Dog	Aug. 12	Sept. 5	Oct. 9	
207	Mesenzoff, Pierre (42) ...	Charkow, Russia ...	Wolf	Apl. 1	Apl. 3	Oct. 10	
208	Aleksandroff, F. (40) ...	Charkow, Russia ...	Wolf	Sep. 14	Oct. 4	Oct. 23	
209	Alferenkoff, F. (28) ...	Charkow, Russia ...	Wolf	Sep. 14	Oct. 4	Oct. 25	

(1) Died while still under treatment. (2) Another man bitten by the same dog lived, and Prof. Peter, of Paris, stated that Rascol died of rage du laboratoire or Pasteur's rabies.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1889 :	1889 :	1889 :	1890 :
210	Bratelski, Tikon ...	Charkow, Russia...	Wolf	Oct. 13	Oct. 18	Nov. 6	Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
211	Plotnikoff, L. (55) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Nov. 10	
212	Sawelieff, W. (27) ...	Charkow, Russia...	Dog	June 11	June 13	Dec. 25	
						1890 :	
213	T—, Alice (8) ...	Paris ...	Dog	Nov. 16	Nov. 19	Feb. 9	<i>Journal de Médecine de Paris</i> , February 16.—Report of Dr. Potin.
		[Loire]		1890 :	1890 :		
214	Paris, Louis (10) ...	Preuilly (Indre-et-	Dog	Jan. 14	Jan. 17	Feb. 18	Dr. Durand in <i>Annales de l'Institut Pasteur</i> , April 25. <i>Times</i> , London, March 13. [Pasteur, April 25.
215	Rankin, Joseph (13) ...	Coleraine, Ireland	Dog	Jan. 29	Feb. 2	Mar. 10	
216	Olivier, Florian (43) ...	Templeuve (Nord)	Dog	Jan. 27	Feb. 3	Mar. 15	Dr. Tison reported the case to <i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
217	Gerday, Louis (10½) ...	St. Georges (Belgium)	Dog	Mar.	Mar. 23	Mar. 31	
218	Grant, Justin (52) ...	Birac (Lot-et-Garonne) ...	Dog	Mar. 23	Mar. 31	May 4	<i>Annales de l'Institut Pasteur</i> , May 25.
219	Dubois, Josephine (70) ...	Locquignol (Nord)	Dog	June 15	June 17	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
220	Dégéan, Albert (31) ...	Ste. Livrade (Lot-et-Garonne) ...	Dog	June 3	June 7	Aug. 6	Dr. Gaumeton reported the case to <i>Annales de l'Institut Pasteur</i> , August 25.
221	Casali, Bianca (7) ...	Copparo, near Ferrara, Italy ...	Dog	Aug.	Aug.	Aug. 29	<i>Roma</i> (Italian Journal), September 3. [Treated at Bologna.]
222	Baudino, Thérèse (13) ...	Bocca, nr. Cannes	Cat	July 30	Aug. 4	Sept. 4	<i>Annales Pasteur</i> , November 25.
223	Martin, Jules (7) ...	Cannes ...	Dog	July 18	July 19	Sep. 16	<i>Journal de Médecine de Paris</i> , September 21.
224	Vidalon, Sébastien (46) ...	Ille-sur-Tet, nr. {	Dog	Sept. 6	Sep. 10	Oct. 2	<i>Galignani's Messenger</i> , October 8, 1890.
225	Domenech, Jean (boy) ...	Perpignan {	Dog	Sept. 6	Sep. 10	Oct. 3	<i>Galignani's Messenger</i> , October 8, 1890.
226	Fournés, Joseph (14) ...	Guyotville, Algeria	Dog	Aug. 1	Aug. 8	Oct. 14	<i>Annales Pasteur</i> , November 25.
227	(¹) Groussous, Jean (52) ...	Fedj-M'zala (Constantine) ...	Dog	Oct. 13	Oct. 22	Nov. 10	<i>Annales Pasteur</i> , November 25.
228-31	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
							1891 :
232	Birebent, Jules (24) ...	Pamiers, Ariège ...	Dog	Oct. 10	Oct. 14	Dec. 1	Dr. Allana, <i>Annales de l'Institut Pasteur</i> , January 25.
						1891 :	
233	Drago, Vincenzo (50) ...	Tripi, Sicily ...	Dog	Nov. 18	Dec. 19	Jan. 5	Report of Drs. Blasi and Russo-Travali, Palermo, 1896. <i>L'Indépendant des Basses Pyrénées</i> , January 22.
234	Brousse, Raymond (24) ...	Toulonne (Gironde)	Dog	Aug. 16	Aug. 20	Jan. 15	
				1891 :	1891 :		
235	Terles, Barthélemy (59) ...	Sainte-Sixte (Lot-et-Garonne) ...	Dog	Jan. 1	Jan. 5	Feb. 8	<i>Annales de l'Institut Pasteur</i> , March 25.
				1890 :	1890 :		
236	Binet, Auguste (75) ...	Méaulte (Somme)	Dog	Dec. 5	Dec. 13	April 15	<i>Annales de l'Institut Pasteur</i> , May 25.
		[(Gironde)]		1891 :	1891 :		
237	Frouin, Gaston (16) ...	Cubzac-les-Ponts	Dog	Apr. 27	May 3	June 1	<i>Annales de l'Institut Pasteur</i> , June 25.
238	(¹) Fridy, Mohammed D. (25)	Sfax (Tunis) ...	Dog	May 2	May 22	June 12	<i>Annales de l'Institut Pasteur</i> , June 25
239	Gagliani, Agata (4) ...	Palermo ...	Dog	May 4	May 6	June 18	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
				1889 :	1889 :		
240	(¹) Juda, Isaac (28) ...	Salonica, Turkey	Dog	May 25	June 3	July 11	<i>Annales de l'Institut Pasteur</i> , September 25.
				1891 :	1891 :		
241	Milet, Henri (11) ...	Montrenil-sous-Bois (Seine) ...	Dog	June 18	June 23	July 20	<i>Annales de l'Institut Pasteur</i> , August 25.
242	Macca, Concetta (75) ...	Catania, Sicily ...	Dog	July 1	July 21	Aug. 2	Report of Drs. Blasi and Russo-Travali, Palermo, 1896. <i>Annales de l'Institut Pasteur</i> , September 25.
243	Pélofi, Baptiste (21) ...	Jaurac (Aude) ...	Dog	Feb. 7	Feb. 14	Aug. 8	
244	Varney, Henry (boy) ...	New York ...	Dog	...	...	Aug. 14	<i>Birmingham Daily Post</i> , August 15.
245	Inzerilla, Pietro (8) ...	Partinico, Sicily...	Dog	June 14	June 19	Aug. 15	Report of Drs. Blasi and Russo-Travali, Palermo.
246	(¹) Sommier, Joseph (6) ...	Joudes (Saône-et-Loire) [(Spain)]	Dog	Aug. 12	Aug. 16	Sep. 2	<i>Annales de l'Institut Pasteur</i> , September 25.
247	Roig, Juan (13) ...	Puebla de Tiana	Dog	Sep. 7	Sep. 12	Oct. 12	<i>Annales de l'Institut Pasteur</i> , November 25.
248	Morton, Robert D. (young man) ...	Columbia, S. Carolina, U.S.A. ...	Dog	Aug. 6	Aug. 7	Oct. 25	Treated at New York.— <i>Boston Post</i> , October 26. [of Lyons.
249	Carry, Louis (13) ...	Lyons ...	Dog	Sep. 11	Sep. 24	Oct. 29	Reported to Pasteur's <i>Annales</i> , (Nov. 25) by Dr. Roux
250	Bommelle, Xavier (54) ...	Remy (Oise) ...	Dog	Oct. 17	Oct. 20	Nov. 12	<i>Annales de l'Institut Pasteur</i> , December 25.
251	Bolinhas, José (4) ...	Crato (Portugal)...	Dog	Nov. 3	Nov. 13	Dec. 7	<i>Annales de l'Institut Pasteur</i> , December 25.
252-55	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
							1892 :
256	Lacombe, Ernest (30) ...	Palestro (Algeria)	Dog	Mar. 17	Mar. 25	Dec. 25	<i>Annales de l'Institut Pasteur</i> , February 25.
						1892 :	
257	Beale, George (boy) ...	Kilkenny (Ireland)	Dog	Nov.	Nov.	Jan. 4	<i>Weekly Irish Times</i> , Dublin, January 2.
258	Hayden (9) ...	Carlow (Ireland)	Dog	May	May	Feb. 4	<i>Times</i> , February 5.
				1892 :	1892 :		
259	Drouet, Georgette (6) ...	D'Issy (Seine) ...	Dog	Feb. 7	Feb. 25	Mar. 11	<i>Annales de l'Institut Pasteur</i> , March 25.

(¹) Died while still under treatment. (²) A remarkable case. The patient a doctor, went to Paris for treatment, and died of hydrophobia two years and two months afterwards.

No.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1892:	1892:	1892:	1892:
260	Santhoux, Eugène (labourer)	Gex (Ain) ...	Dog	Feb. 9	Feb. 14	April 2	<i>Annales de l'Institut Pasteur</i> , April 25.
261	Pimentade Castro, B. P. (15)	Vianna de Castello (Portugal)	Cat	Mar. 2	Mar. 8	April 9	<i>Annales de l'Institut Pasteur</i> , May 25.
262	Micoïn, Augustin (18) ...	Versailles ...	Cat	Mar. 15	Mar. 17	April 11	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
263	Ferudja, Francois (12) ...	Guelma, Algeria...	Dog	Apr. 5	Apr. 12	April 26	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
264	Labelle, Pierre (72)	Labèze	Dog	Apr. 9	Apr. 15	May 7	<i>Annales de l'Institut Pasteur</i> , June 25.
265	Segura, Sebastien (47)	Oran	Dog	Apr. 14	Apr. 24	May 15	<i>Annales de l'Institut Pasteur</i> , June 25.
266	Sauzia, Rosario (8) ...	Palermo ...	Dog	April 22	May 6	May 30	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
267	Mathias, Thomas (48) ...	Norvao, Portugal	Dog	June 15	June 30	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
				1891:	1891:		
268	Ruffini, Pietro (32) ...	Rocca di Papa, Italy	Dog	Oct. 23	Oct.	Aug. 27	Died at Rome. Case reported in Italian journals.
				1892:	1892:		
269	Desvignes, Gustave (39) ...	Avenue de Breteuil, Paris ...	Dog	July 23	July 26	Aug. 29	<i>L'Etoile Belge</i> , Brussels, September 8.
				1887:	1887:		
270	(¹) Lindley, Herbert (17)...	Cumberworth, Huddersfield	Dog	Aug. 1	Aug. 6	Sept. 7	<i>Huddersfield Daily Chronicle</i> , September 8.
		[land]		1890:	1890:		
271	Van Faassen (9) ...	Beunbroek (Hol-)	Dog	June 4	June 18	Oct. 15	<i>Annales de l'Institut Pasteur</i> , December 25.
				1892:	1892:		
272	Gernez, Achille (4½) ...	Beaumont-les-Cambrai (Pas-de-Calais)	Dog	Oct. 25	Oct. 28	Nov. 18	<i>Annales de l'Institut Pasteur</i> , December 25.
273-4	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
275-7	Three persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
							1893:
278	Schirch, Louis (32) ...	Djadjelli (Algeria)	Dog	Aug. 22	Aug. 28	Oct. 24	<i>Annales de l'Institut Pasteur</i> , January 25.
279	Scherr, Emile (35) ...	Oran ...	Dog	Oct. 9	Oct. 16	Dec. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
280	D'Almeida, José J. (10) ...	d'Aveiro (Portugal)	Dog	Nov. 28	Dec. 7	Dec. 30	<i>L'Eclair</i> and other Paris Journals.
281-6	Six Persons ...	Moscow ...	in	the	year	1892	Dr. Goldenbach, <i>Pasteur's Annales</i> , September 25.
							1893:
287	(²) Guillon, Augustine (17)	Voiron (Isère) ...	Dog	Dec. 13	Dec. 16	Jan. 4	<i>Annales de l'Institut Pasteur</i> , January 25.
288	Duvivier, Charles (32) ...	51, rue Menilmontant, Paris ...	Dog	Oct. 18	Oct. 20	Jan. 7	<i>The Morning</i> (Paris news), January 7, and <i>Pasteur's Annales</i> , February 25.
				1893:	1893:		
289	Nardo, Francesca Maria (6)	Gioiosa, Sicily ...	Dog	May 15	May 18	June 1	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
290	Chetal, Antoine (26) ...	Aix-les-Bains ...	Dog	May 3	May 4	June 1	<i>Annales de l'Institut Pasteur</i> , July 25.
291	Chastaing, Léon (28) ...	Paris ...	Dog	May 12	May 15	June 25	<i>Annales de l'Institut Pasteur</i> , July 25.
292	Morel, Auguste (18) ...	Rue Portalis, Paris	Dog	May 30	May 30	Aug. 5	<i>Annales de l'Institut Pasteur</i> , September 25.
293	Mermont, Melchior ...	Bonneville ...	Dog	July 14	July 18	Aug. 6	<i>Annales de l'Institut Pasteur</i> , August 25.
294	Badaluccho, Mario (7) ...	Marsala, Sicily ...	Dog	July 28	Aug. 3	Aug. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
295	Fages, Alfred (40) ...	Alais (Gard) ...	Cat	July 12	July 14	Aug. 20	<i>Le Gaulois</i> , Paris, August 22, and <i>Pasteur's Annales</i> .
296	Montessuy, J. M. (57) ...	St. Pierre-de-Rumilly (H. Savoie)	Dog	July 14	July 18	Aug. 23	<i>Annales de l'Institut Pasteur</i> , October 25. [Oct. 25.
							1894:
297	Ollero, Nemesio (52) ...	Debicho, Cordova, Spain ...	Dog	Dec. 15	Dec. 26	Jan. 5	<i>Annales de l'Institut Pasteur</i> , May 25.
							1894:
298	F. Carbonnell (53) ...	Pozzo-Blanco, Cordova ...	Dog	Dec. 18	Jan. 5	Jan. 26	<i>Annales de l'Institut Pasteur</i> , May 25.
							1893:
299	Robert, Joseph (8) ...	Bougie (Constantine) ...	Dog	Oct. 4	Oct. 10	Feb. 16	<i>Annales de l'Institut Pasteur</i> , April 25.
300	A donanier... ...	Souk-Ahras (Algeria) ...	Dog	Dec.	Dec.	Mar.	<i>Journal de Médecine de Paris</i> , March 18.
301	Fournès, Auguste ...	Chéragas (Algeria)	Dog	Aug. 1	Aug.	Mar. 12	<i>Journal de Médecine de Paris</i> , March 18.
							1894:
302	Pialut, Huberte (56) ...	Neuilly ...	Dog	Dec. 31	Jan. 3	April 10	<i>Annales de l'Institut Pasteur</i> , July 25.
							1894:
303	Varesi, Giovanni (5) ...	Pianello Valtidone, Italy ... [dale	Dog	Mar. 22	Mar. 23	May 15	<i>Il Secolo</i> (Milan), August 13, 1896. [Treated at Milan by Pasteur's intensive method.]
304	Oakes, Enoch (child) ...	Shawforth, Roch-	Dog	May 31	June 5	June 25	<i>Manchester Courier</i> , July 23.
305	Desquincourt, M ^{me} . (43)	Liévin (Pas-de-Calais) ...	Dog	Feb. 16	Feb. 18	July 12	<i>La Croix</i> , Paris, July 20.
306	Bentivegna, Vincenzo (30)	Corleone, Sicily ...	Dog	Mar. 4	Mar. 6	not given	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
307	(³) Stevenson, Malcolm (25)	Birkenhead ...	Dog	June 10	July 1	Aug. 8	<i>Birkenhead News</i> , August 11.

(¹) See No. 123; the two Lindleys were brothers, and were inoculated together. (²) Died while still under treatment. (³) Lieut. Stevenson, of the 93rd Highlanders, was bitten at Dalhousie, Punjab, India, where his regiment was stationed, and died of paralytic rabies at Birkenhead.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCU- LATION.	DIED OF HYDRO- PHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1894 :	1894 :	1894 :	1894 :
308	Delepine, boy (15) ...	St. Denis-des-Monts (Amfreville) ...	Dog	June 16	June 17	Aug 12	<i>L'Industriel Elbeuven</i> , August 15.
309	Saussol, Louise (33) ...	Cessenon (Hérault)	Dog	July 5	July 10	Aug. 15	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
310	Vayre, Louis (5) ...	Bize (Aude) ...	Dog	June 29	July 8	Sept. 1	1894 : <i>Annales de l'Institut Pasteur</i> , November 25.
311	Culotta, Michele (74) ...	Bagheria, Sicily...	Dog	June 18	June 19	Sept. 13	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
312	Meynadier, Achille (39) ...	Sidi-bel-Abbès (Algeria) ...	Dog	Aug. 11	Aug. 19	Oct. 12	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
313	Richaud, Joseph (4) ...	Beaussemlant (Drôme) ...	Dog	Oct. 4	Oct. 7	Nov. 6	1894 : <i>Annales de l'Institut Pasteur</i> , November 25.
314	Bentley, James (18) ...	Clayton-le-Moors, Lancashire ...	Dog	Oct. 18	Oct. 23	Nov. 10	<i>Annales de l'Institut Pasteur</i> , November 25.
315	Morreale, Angelo (8) ...	Bagheria, Sicily...	Dog	July 29	Aug. 2	Nov. 15	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
16-17	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
18-21	Four persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur, Napoli</i> , by Dr. A. Calabrese, Naples, 1896.
322	Prévost, Joseph (58) ...	Issy (Seine) ...	Dog	July 30	Aug. 4	Nov. 22	1895 : <i>Journal de Médecine de Paris</i> , March 10th, and <i>Annales de l'Institut Pasteur</i> , May 25.
323	Barry, Séverin (62) ...	Vattetot-sur-Mer (Seine-Inférieure)	Dog	Dec. 7	Dec. 12	Jan. 15	<i>Annales de l'Institut Pasteur</i> , May 25.
324	Rio, Julien Marie (7) ...	Missillac (Loire-Inférieure) ...	Dog	Dec. 20	Dec. 23	Jan. 22	<i>Annales de l'Institut Pasteur</i> , May 25.
325	Garrigues, Elisabeth (29) ...	Castelsarrazin (Tarn-et-Garonne)	Cat	Jan. 15	Jan. 18	Feb. 14	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
326	Stewart, Robertson (38) ...	Glasgow ...	Dog	Mar. 8	Mar. 11	Apl. 1	<i>North British Daily Mail</i> , April 2nd.
327	Longino, Salerno (14) ...	Borgetto, Sicily ...	Dog	Mar. 7	Mar. 9	April 6	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
328	Corepetti, Luigi (7) ...	Bobbio, Italy ...	Dog	April 8	April 10	May 3	<i>Il Secolo</i> (Milan), August 13. [Treated in Milan according to Pasteur's intensive method.] 1896.
329	(*) Blutel, Isidore (27) ...	St. Georges-d'Ambery (Orne) ...	Dog	Apl. 22	Apl. 28	May 14	<i>Annales de l'Institut Pasteur</i> , November 25.
330	Kelly, James (6) ...	Belfast ...	Dog	Apl. 18	Apl. 23	June 25	[November 25.] <i>Irish News</i> , Belfast, June 27, and <i>Pasteur's Annales</i> ,
331	(*) Walton, B. A. ...	Houston County, Ga., U.S.A. ...	Dog	May 19	May	June 30	<i>The Dog Question</i> , Dobbs Ferry, N.Y., August.
332	Danio, Diego (15) ...	Grotte, Sicily ...	Dog	May 25	May 31	July 4	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
333	Howard, Benjamin (14) ...	Hyde, Cheshire ...	Dog	Nov. 14	Nov. 18	Aug. 29	1894 : <i>Hyde Reporter</i> , August 31.
334	(*) Huard, Joseph (39) ...	Saint Ellier (Mayenne) ...	Dog	Dec.	Dec.	Sep. 14	1894 : <i>L'Eclair</i> (Paris), September 15.
335	Nothard, Samuel (28) ...	Todmorden, Lancs.	Dog	Sep. 8	Sep. 15	Oct. 17	1895 : <i>Manchester Guardian</i> , October 22.
336	(*) Wilkins, Ethel (3) ...	Twickenham Park	Dog	Oct. 13	Oct. 15	Nov. 11	<i>The Globe</i> , London, November 12.
337	Lo Presti Vito (55) ...	Vizzini, Sicily ...	Dog	Oct. 8	Oct. 16	Nov. 25	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
338	(*) Wallender, Miss ...	Temesvar, Hungary	Dog	Dec. 25	Dec. 26	Jan. 11	1896 : <i>Echo</i> (London), and other journals, Jan. 11 and 13.
339	Plescia, Francesco (10) ...	Contessa Entellina, Sicily ...	Dog	Mar. 2	May 11	Feb. 10	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
340	Lasalle, Louise (28 months)	Pomarez (Landes)	Cat	Oct. 16	Oct. 19	Apl. 4	<i>Annales de l'Institut Pasteur</i> , December 25.
341	(*) Labat, Pierre (37) ...	Bordeaux ...	Dog	Feb. 21	Feb. 25	May 24	1896 : <i>Annales de l'Institut Pasteur</i> , June 25.
342	Lambert, Thos. D. (18½) ...	Stockport...	Dog	Mar. 3	Mar. 8	June 20	1895 : <i>Manchester Courier</i> , <i>Daily News</i> (London), and other journals, June 22; <i>Brit. Med. Journal</i> , July 4.
343	Boy ...	Orthez (Basses Pyrénées) ...	Dog	June	June	June 22	1896 : Died at l'Hôpital de la Pitié, Paris.— <i>L'Indépendant</i> (Pau), June 24.
344	Barimbordes, Victor (12) ...	Navarreux, Pau ...	Dog	April 5	April 26	June 20	Telegram from Pau in <i>Il Secolo</i> (Milan), June 26; also <i>Annales de l'Institut Pasteur</i> , December 25.
345	Chapelier-Marty (13) ...	Sauvagnon, Pau ..	Dog	June 1	June 2	June 29	<i>Daily News</i> (London), and <i>L'Indépendant</i> (Pau), June 30.

(1) This patient was killed through jumping, while mad, from a third storey window; he was twice treated at the Pasteur Institute, in December, 1894, and April, 1895. (*) Became ill before the inoculations were finished, and died two days after their completion. (2) Treated at the Pasteur Institute, Budapest. (*) Treated at the Pasteur Institute, New York. (*) This small child received no fewer than 48 inoculations—24 during the last 36 hours of her life, and after her case had been pronounced to be hopeless by the doctors at the Pasteur Institute, Paris. (*) The biting dog fled and was not traced; the wounds (on the left hand and head) were at once cauterised with a red-hot iron.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1895:	1895:	1896:	1896:
346	Openshaw, Thomas (man)	Radcliffe, Manchester ..	Dog	Nov. 20	Nov. 22	July 14	<i>Manchester Guardian</i> , July 17.
				1896:	1896:		
347	Cros, Léon (26 months) ...	Beziers ...	Dog	July 19	July 25	Aug. 28	<i>Annales de l'Institut Pasteur</i> , December 25.
348	Perico, Luigi (13) ...	Seriate, Bergamo, Italy ...	Dog	Aug. 18	Aug. 19	Sept. 6	[Treated at Turin.] <i>Il Secolo</i> , Milan, September 7, 1896.
349	(*) Van Teyn, Lieut. L. ...	Dutch East Indies	Dog	Sept. 22	Sept.	Nov. 14	<i>La Patrie</i> , Paris, November 26.
350	Cavarroc, Marie (25) ...	Fan, St. Parthem, France ...	Dog	July	July	Nov. 25	
351	(*) Tibodo, Victor (man) ...	Tourcoing, nr. Lille	Dog	Oct.	Oct.	Dec. 5	<i>British Medical Journal</i> , December 12 (Paris correspondence).
				1895:	1895:		
352	Avegger, Joseph (20) ...	Willisau-Campagne, Switzerland ...	Dog	Oct. 20	Oct. 28	Dec. 19	<i>Annales de l'Institut Pasteur</i> , December 25.
				1896:	1896:		1897:
353	Henry (boy) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 21	Two of these cases were reported by <i>British Medical Journal</i> (quoting <i>Daily Mail</i>), January 2, the four reported and vouched by Dr. Dulles, Philadelphia. All were treated by Dr. Gibier, New York.
354	Eppers (boy) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
355	Perry (boy) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
						1897:	
356	Wilson (boy) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Jan. 5	
				1897:	1897:		
357	Davoust, Médéric (60) ..	Livry-sur-Orthon, France ...	Dog	Jan. 15	Jan. 19	Mar. 17	<i>Le Petit Parisien</i> , March 20.
				1896:	1896:		
358	Thompson, James (4) ...	Reddish, Manchester...	Dog	Dec. 11	Dec. 14	Mar. 27	<i>Manchester Guardian</i> , March 30.
				1897:	1897:		
359	Sapin, Marie ...	Bordeaux ...	Dog	—	—	Apr. 18	Reported by Dr. A. Lutand in <i>Journal de Médecine de Paris</i> , June 27. <i>L'Eclair</i> , Paris, May 17.
360	(*) Mauléon, Gaston (child)	Helleme, Lille ...	Dog	—	—	Apr. 19	
361	(*) Fortin, Paul (21) ...	Nanterre ...	Dog	Jan. 28	Jan. 30	April	
362	Silk, Charles (6) ...	Long Island City, U.S.A. ...	Dog	Apr. 27	Apr. 28	May 16	
363	(*) Baronchelli, Maria (child) ...	Ponte di Nossas, Val de Seriana, Italy ...	Dog	May	May 3	May 28	<i>Il Secolo</i> , Milan, June 30.
364	(*) Albini, G. B. (71) ...	Sorpello, Italy ...	Dog	Feb.	Feb.	June 1	<i>Il Secolo</i> , Milan, June 2.
365	(*) Tribiani, Francesco (7)	Piacenza, Italy ...	Dog	May	May	June 14	<i>Il Secolo</i> , Milan, June 15.
366	(*) Cattorini, Angelo (48)	Samarate, Italy ...	Dog	May 18	May 19	Aug. 25	<i>Il Secolo</i> , Milan, August 25.

(*) Treated and died at Batavia; case reported by Mr. A. J. J. Eeling, of Amsterdam. (*) The treatment is stated to have been left unfinished owing to an attack of fever. (*) Inoculated at Lille, by Dr. Calmette. (*) Died at the Beaujon Hospital. (*) Treated at the Hospital Maggiore, Milan. (*) Treated at Marseilles. (*) Treated at the Antirabic Institute, Milan. (*) Died in the Ospedale Maggiore, Milan.

RECAPITULATION.

INOCULATED IN PARIS:—

1. Under first formula ...	41
2. „ intensive treatment ...	28
3. „ third formula ...	167
	236

INOCULATED IN RUSSIA:—

1. At Odessa ...	26
2. At Charkow ...	9
3. At Moscow ...	6
4. Elsewhere in Russia ...	8
	49

INOCULATED AT OTHER CENTRES:—

1. In Italy ...	70
2. At Rio de Janeiro ...	1
3. At New York ...	7
4. At Budapest ...	1
5. At Batavia ...	1
6. At Marseilles ...	1
	81

Total deaths after preventive treatment ... 366

THE ZOOPHILIST.

Issued by the VICTORIA STREET SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, united with the INTERNATIONAL ASSOCIATION FOR THE TOTAL SUPPRESSION OF VIVISECTION, 20, VICTORIA STREET.

VOL. XVII. No. 6.]

LONDON, OCTOBER 1, 1897.

[POST FREE, 3½d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE first meeting of the Council under the new scheme for the government of the Victoria Street and International Society has been convened, to be held at the house of the Hon. Stephen Coleridge on the 6th inst. Subsequent to that date the Society will assume its new title of "THE NATIONAL ANTI-VIVISECTION SOCIETY."

IN reference to the late election at Sheffield, where Mr. Maddison, one of the candidates, gave a pledge to oppose vivisection, and was afterwards elected, a correspondent writes:—"I am pleased to be able to tell you that I have received a card from Mr. Maddison, M.P., in which he says: 'Mr. Westcott did excellent service.'" Mr. Westcott, a former lecturer of the Society, was lent to the Electoral League for the purpose of working at Sheffield during the election, so that this news will be gratifying to our friends generally.

ANOTHER correspondent sends us an extract from a letter of the Rev. John E. Gladstone, M.A., a cousin, we understand, of the Right Hon. W. E. Gladstone.

The letter, which is dated from Braunton, North Devon, and was written in June last, is as follows:—

"Notwithstanding the plausible and even (so-called) humanitarian arguments, used in the interests of vivisection, I do not hesitate to express my utmost abhorrence of the practice, and to give utterance to my prayer and hope that it may be by law entirely forbidden and prohibited. I cannot but believe it to be utterly opposed to the mind and will of God, as well as to the feelings and principles of all sincere Christian men. To torture the inoffensive creatures of God for the assumed, but not proved, benefit of mankind, appears to me to be a selfish and wanton exposition of their principles, who say, 'Let us do evil, that good may come,' of whom the Apostle Paul (Rom. iii. 8) says, 'whose damnation,' (*Kρίσις*, judgments) is just.'"

DR. LAUDER BRUNTON wound up his address at the late International Medical Congress at Moscow, by remarking that "The great development of pathology during the last quarter of a century, let it be remembered, is due to a chemist, the immortal Pasteur." We dare say Dr. Brunton regarded it as a good point to his address to end with the name of Pasteur. But what a reflection on the lack of inspiration in his own compatriots thus to laud Pasteur. Pasteur affected to be a follower of Jenner, but long years elapsed before he invented what he regarded as a pushing onward of Jenner's theories. The natural question that arises is, What were English pathologists doing to leave it, after a long blank interregnum of years, to a Frenchman, and a chemist to boot, to show them the way? Not that the way is a legitimate way, though Dr. Brunton, speaking from the ranks of the vivisectionists seemed to think that there was merit in it.

DR. BRUNTON, in his new book, "The Action of Medicines," says (p. 57): "If we give too much of our antiseptics to a patient we run the risk of destroying him as well as the organisms. When I was a student I went one day to a debating society where there was to be a discussion on the *trichina spiralis*, that little worm that finds its way into the muscles and various parts of the body. One of my friends got up and said: 'Gentlemen, I am very much astonished that no one has thought of destroying this parasite. It has been found, gentlemen, that this worm dies at a temperature of 180°, and I therefore suggest that the patient should be placed in a warm bath, and his temperature raised to 180° F., and then the worms will die. He did not reflect that by this treatment the patient would be boiled alive.' It is a singular fact that a patient was actually killed at Bradford in this way in an attempt to destroy the bacilli of wool-sorter's disease.—(See *Dying Scientifically*, p. 113.)

IN Dr. Brunton's volume there are many painful

matters for Zoophilists. Thus, in treating of spinal convulsions, he says (p. 160):—

"If you destroy the spinal cord by means of a piece of thick wire, running it down the spinal canal, the convulsions disappear from the parts of the body supplied by the piece of cord which you destroy. If you destroy the cord from above, downwards, by running the wire down the spinal canal, the convulsions disappear from the upper part of the body, while they remain in the lower. If, on the contrary, the whole of the spinal cord be exposed by removing the lamellæ of the spinal canal, and the lower part of the cord be destroyed first, then the convulsions disappear from the lower part of the body, while they remain in the upper part."

THE localization of Eve's brain centres when she took the apple in the Garden of Eden is a strange subject for a diagram in a medical book, but Dr. Lauder Brunton, in his chapter on "Cortical Centres" has a diagram on p. 164 of "the motor centres in the brain modified from those of Ferrier and Horsley," in which we find the following curious references:—"(1) Eve sees the fruit, (2) looks more eagerly at it, (3) turns towards it, (4) puts forth her hand to take it, (5) eats the apple, (6) picks out and throws away the refuse, (7) goes and gets another for Adam," and so on. The centre for disobedience of God's commandment is not shown; evidently the experimenters have conveniently overlooked it.

THERE seems to be a new and effective remedy for snake-bite, quite apart from vivisection, if the particulars given of the recent case of Mr. F. J. Summers be reliable, and no doubt, as they come from himself, they are. Mr. Summers was bitten in the foot at Opobo, West Africa, by a double-horned viper. He was told he would die, but iodine was injected and brandy given freely, and he recovered. It may be remembered that Dr. Mueller announced in 1890 that he had also found strychnine an effective remedy. The experiments of Dr. Fraser with snake venom may therefore be regarded as being as useless as they were inconclusive.

HYDROPHOBIA, we learn through a dispatch published in the *Standard*, of August 31st, "is considerably on the increase in the provinces of France," and "notwithstanding that the South of France sends a growing number of patients to the Pasteur Institute, it is Paris which furnishes that establishment with the largest number of patients." Prevention is better than cure, it is well known, but although it has always been claimed—indeed the claim is the foundation of the whole system—that the Pasteurian process renders dogs refractory against rabies, it cannot be applied to prevent their taking the malady when they are allowed to go free in the streets. Surely this condemns the whole thing. Rabies, the scientists teach, can only be spread by bites, though we do not admit it. Pasteur's system will render dogs proof against it and yet it is not used for that purpose! The fact is that an inoculated dog, as we have often pointed out, is an infected dog, and cannot be allowed to go at large for fear of the danger to the public. But what a satire is this fact, coupled with the alarming increase of rabies in France, on the Pasteurian system as a whole.

THE *Medical News* of New York, August 7th, in an article on Rabies, says, so rare is this disease that 'During the thirty years of the existence of the

American S.P.C.A. there has been recorded on its books no well-established case of rabies either in dog or man. . . . Probably not one dog in a thousand which is thought to be mad is really afflicted with the malady. . . . There are more than a million chances to one that any dog which is supposed to be mad is not mad at all." This is the deliberate opinion of one of the most important orthodox medical journals of the United States.

THE *American Practitioner and News* of July 10th, says that Dr. C. W. Dulles recently read a paper before the Medical Society of Pennsylvania on the question, "Is Hydrophobia a Myth?" Amongst other propositions he laid it down (1) That hydrophobia cannot be considered as a specific disease; (2) Hydrophobic symptoms appear in a great many diseases; (3) Many cases are recorded in which persons have died of hydrophobia, while the dogs who bit them survived; (4) There is not in the whole history of hydrophobia a single credible case in which a person suffering with this disorder has communicated it to another human being or animal.

MESSRS. ELTING and CALVERT, of the Anatomical Laboratory of the Johns Hopkins University, Baltimore, record in the *Bulletin* of the Hospital for July, 1897, some atrociously cruel experiments on dogs. The bellies of the animals were opened and their intestines scrubbed so as to cause inflammation by mechanical irritation. They also perforated the intestines to study the results of the process. The following was the method of procedure given in their own words:—

"For the first group of experiments four dogs were used. By a median incision the abdominal cavity was opened, the intestine and parietal peritoneum were vigorously scrubbed with gauze sponges wrung out in warm normal salt solution. After this treatment numerous minute hæmorrhages, caused by the scrubbing were noticed . . . and the intestine presented an extremely congested appearance. . . . The process of scrubbing as performed by the operator and an assistant required from eight to twelve minutes. In every case the dog appeared ill for about twenty-four hours after the operation."

IN a second group of experiments four dogs were used. The bowel was perforated by a stick of caustic potash. The animals showed symptoms of severe inflammation of the bowels and died in from twelve to twenty hours from the time the perforation was produced. The experimenters say:—

"In every case the dog showed marked symptoms of peritonitis and evidences of pain. When lying down the legs were drawn towards the abdomen, which was held very tense. Any attempt to straighten out the legs seemed to cause great pain."

In other sets of experiments large abscesses formed in the bowels, and the whole research must have entailed the maximum of agony possible for the victims to suffer. Of course anæsthetics were out of the question.

THE celebrated Hyderabad Chloroform Commission decided that chloroform has no perils whatever for the heart, and that only the respiration is liable to fail under its administration. Messrs. Marshall and Heath, experimenting in the Pharmacological Laboratory, Cambridge (*Journal of Physiology*, vol. xxii. p. 42), say:—

"That chloroform exerts a depressant action in the circulation is shown by the results of all recent investigations. That

the heart is influenced is asserted by all. To the isolated heart of a frog chloroform acts as a powerful poison."

We wonder how students reply to questions in such matters in their examinations!

DR. SWALE VINCENT records some injection experiments in the same number of the above-mentioned *Journal*, p. 111, with extract of supra-renal capsules. The research took place at University College, London. After the injections into guinea-pigs we read—"There are also frequently signs of bleeding from the mouth and nostrils—guinea-pigs always manifest considerable restlessness after injection, running about and grunting or squeaking continually." Paralysis of the limbs was a common effect.

"THOUSANDS of physicians believe like myself that the bacilli are the result and not the cause of the disease." This is the deliberate opinion of Dr. Melite Chartier, of the Faculty of Paris, expressed in the *Medical Brief*. The doctor says, in reference to anti-toxin, "I am as opposed to its use as I was to the administration of the Elixir of Brown-Séquard, or the Koch's lymph. . . . if I err I am in a good and illustrious company."

MR. CHRISTOPHER HEATH, Professor of Clinical Surgery in University College, London, delivering the Address on the Teaching of Surgery in the Section of Surgery at the British Medical Association Meeting at Montreal, said:—

"I regret to find, that in Great Britain at least, the teaching of anatomy is gradually getting more and more into the hands of Professors who are anatomists but not surgeons, and that their tendency is to lay stress upon transcendental details rather than surgical relations As this applies equally to the teachers of physiology and chemistry, the unfortunate medical student becomes the victim of science (falsely so-called), and sometimes develops into that marvellous being, a London B. Sc."

These be brave and wise words, but Mr. Heath is a *Vox clamantis in deserto*, for the world is science mad.

It has often been claimed that the virtues of digitalis (or foxglove) have been discovered in the physiological laboratory by experiments on animals. We have had frequent occasions to show that this is not true. Mr. C. R. Marshall, of the Pharmacological Laboratory, Cambridge, in an article in the *Journal of Physiology* (vol. xxii. p. 2), on "Digitalis," says:—

"The action of digitalis has been a debatable point ever since its introduction into medicine. Regarded at first as a sedative to the heart it has been shown by experimental observation to be in reality a tonic. . . . Its mode of action, however, is still unknown."

THE *Pall Mall Gazette* of August 31st, in a leading article on Indian affairs, said:—

"The introduction of the Pasteur system of inoculation for cholera touched Brahmin susceptibilities, and since that nostrum has barely emerged from the condition of a sanitary fad, the authorities ought to have thought many times before consenting to its establishment."

This is very much on the line the *Zoophilist* adopted from the first. We foresaw the effects of the "nostrum" and the "fad" long ago. The *Pall Mall Gazette* has become wise after the event.

At the International Medical Congress, held at

Moscow in August, Dr. Sematzky of St. Petersburg, gave an account, says the *British Medical Journal's* special correspondent, of twenty-two cases of malignant growths which he had treated by inoculations of serum. They were all unsuccessful. The method is liable to be followed by serious complications, such as blood-poisoning and erysipelas. He has no faith whatever in the reports of wonderful cures published in the medical journals, and thinks that where it is alleged that benefit has been received from serum-therapy an error has been made in the diagnosis.

BLUMREICH and Jacoby, says the *British Medical Journal*, September 4th, have removed the spleen from some two hundred guinea-pigs, and subsequently injected virulent bacilli; the animals deprived of their spleens lived longer than the others. The experimenters conclude that removal of the spleen induces recovery from infective processes. The time may come when the sanitary inspector in an epidemic may order us to see to our drains and have our spleens amputated.

THE Rev. Baring-Gould in his new book, "A Study of St. Paul," comments on the strange question of the apostle, "Doth God take care for oxen?" (1 Cor. ix. 9). Mr. Gould declares that to ask such a question betrays the innate cruelty of the Oriental mind towards animals. How St. Paul could have doubted God's care for His creatures, seeing that the Scriptures as he knew them, are full of evidence of the fact, and that Christ taught that His Father's care is exhibited to the humblest sparrow has puzzled many a thoughtful Christian soul.

DR. JAMES ERSKINE has written a little book on the hospital question, which contains some curious admissions. We are told "the real scientific work and investigation is mostly done by hospital men, because their position supplies them with the material." Ordinary practitioners are "all equally qualified to practise, but are far from being equally situated as to opportunities of study and research." *Material* is good, and so is *opportunity of research*, yet the doctor says people have got over the repugnance they used to feel regarding hospitals.

DR. SAMUEL WILKS, in an article entitled, "Fifty Years Ago," said, jokingly, that fifty years hence "All microbes may have been put to the sword; all organs may be taken out, washed, and renewed; continued transplantation of the active glands, like the thyroid, keep the brain in continued activity; or injections of Brown-Séquard's fluid preserve perpetual youth."

Dr. Wilks is not serious, though he does believe that medical progress in the future will be a development of present methods. We, on the contrary, believe that fifty years hence all this vivisectional *furor* will have been long discredited, and the operations named will be relegated to the limbo of mediæval absurdities.

DR. BERDOE communicated to the editor of the *Daily Chronicle* of the 10th ult. some of the leading facts contained in our article of last month, headed "The Vivisector in the Lunatic Asylum." Thereupon the editor of the *Chronicle* wrote and published the following observations:—

"Can it be true, as Dr. Berdoe asserts in a letter which we publish elsewhere, that American doctors make lunatics the subjects of toxic experiments? According to the *Bulletin* of the Johns Hopkins University the thing seems to be done,

and openly enough too. For recent experiment, eight lunatics in the City Asylum of Baltimore were selected, these luckless persons having passed, or being about to pass, the limit of time in which recovery could be confidently expected. They were dosed with thyroid extract till loss of weight, enfeeblement of the heart's action, and other serious symptoms showed themselves in several cases. Two patients became frenzied, and one of these died 'before the excitement had subsided.' The conclusion arrived at by the doctors, that the said treatment 'is not unattended by danger to the health and life of the patient,' is, no doubt, correct. In this country the verdict in such a case would be supplemented by another from a jury, and it would certainly be detrimental to the health, if not to the life, of the operator."

THE *Walsall Express and Star* (September 17th) copied the substance of Dr. Berdoo's letter into its own leading columns, and added the following comment:—

"We should dearly delight to make some experiments on Dr. Berkley. We should put him on bread and—thyroid extract, and compel him to keep a diary of his sensations for the advancement of medical science."

Dr. Berkley ought not to object to this process, because if it be legitimate to experiment on one man, it is so to treat another in the same way. Should Dr. Berkley object, it would prove that he considered the proceeding one that ought not to be done at all.

THE *British Medical Journal* is greatly distressed about Dr. Berdoo's revelations concerning these toxic experiments on lunatics at Baltimore Asylum. We did not expect for a moment that the Editor would justify cruel experimentation on helpless lunatics, experimentation that it was admitted was perilous to the health and even the life of the victims. But we estimated the ethical standard of the managers of the *British Medical Journal* too highly. Their distress is not for the victims, nor on account of the cruelty of the researchers, but is exhibited because "Dr. Berkley made use of one or two phrases in his paper which gave some sort of excuse for Dr. Berdoo." In plain terms Dr. Berkley committed the sin of being found out.

Obituary.

MR. RICHARD HOLT HUTTON.

This gentleman, whose name is well-known amongst anti-vivisectionists, for he sat on the Royal Commission of 1875, practically as representing their cause, died on the 10th of September, after a long illness. One of the daily journals, in its notice of him, said, "he will be remembered as a man who throughout his life preached incessantly to ears which heard him the eternal difference between Right and Wrong." Most certainly he did so in regard to cruelties inflicted on animals in the name of scientific research. We have an original leaderette from the *Spectator*, evidently from his hand, before us, which terminates thus—"In our belief, you may buy knowledge at the cost of sin, and often do so in scientific investigations, no less than in the conduct of life." Mr. Hutton was to the last an honorary member of the Victoria Street Society, and some years back appeared on its platform and spoke at one of the annual meetings with great effect. The *Spectator*, of which he was joint editor and part proprietor, was always open to advocate the claims of animals to consideration and to record any of their more remarkable displays of intelligence and attachment. It was not so often, however,

that vivisection was alluded to, but on one remarkable occasion Mr. Hutton adverted to it with authority, having been himself a member of the Royal Commission. Mr. Darwin had written a letter to Professor Holmgren, of Upsala, which was immediately published in the *Times*. Commenting on this letter in his own journal, Mr. Hutton—we think we may say so, for the article seems avowedly from his pen—wrote: "Mr. Darwin makes one statement which is entirely erroneous. He says that 'the investigation of the matter [vivisection] by a Royal Commission proved that the accusations made against our English physiologists were false.' The Royal Commission did not report this. They came to no such conclusion, and though that may be Mr. Darwin's own inference from what they did say, it is only his inference, and not theirs. In our opinion, it was proved that very great cruelty had been practised with hardly any appreciable result, by more than one British physiologist." This point has been lately raised in another quarter, and it will be useful to place this authoritative statement again on record, especially as we can unfortunately no more have it repeated by Mr. Hutton himself.

As indicating the depth of Mr. Hutton's feelings in regard to the anti-vivisection cause, we are allowed to quote from one of his private letters. Writing from the *Spectator* Office, on June 24th, 1884, to Miss Cobbe, he said:—"I am extremely grieved to hear you are going to leave your work. I cannot say how greatly I have valued it, and how much I feel bounden to you for putting me on some of the best work I have done for this country; that of which, as far as one can be content with anything, I am most content,—or least discontented."

MR. E. MEACHAM, M.R.C.S.

The Manchester papers announce the death of this gentleman, who resided at Red Bank, near that city. Late in life he entered the medical profession for the purpose of labouring more effectively amongst the poor, to whom he was devoted. He took an active interest in ragged schools and those attending them, and exerted himself for many years to inculcate habits of thrift and temperance amongst the poor around him. He had held the appointments of a Poor-law Medical Officer, of Medical Superintendent of the Manchester Medical Mission Dispensary, and (for a short period) of Surgeon to the General Hospital for Sick Children. He was a staunch anti-vivisectionist, and frequently helped the movement by voice and pen. His funeral, in addition to many personal friends, was attended by a large number of people from the district where he had so long laboured.

THE LATE MR. R. H. HUTTON'S PLEA FOR CATS AND DOGS.

Apropos of the recent death of Mr. R. H. Hutton, it will be of interest to reproduce the separate report he made as a member of the Royal Commission of 1875, in the effort to save dogs and cats entirely from being vivisected. As will be seen, it is throughout eloquent and in parts pathetic. It ran as follows:—

"Should it please Your Majesty and Parliament to pass any measure such as we have recommended in this Report, I desire to suggest one additional restriction, which might either be embodied in the statute or endorsed by the Secretary of State, among the conditions of the license which we have proposed. That restriction is, that the household animals, dogs and cats, should be exempted altogether from liability to experiments of this kind. The evidence we have taken seems to me to supply two weighty reasons for such a restriction; while a third is contained in the very nature of the relation existing between those creatures and man. The first, and in some respects the most weighty and practical reason, is this—that there is evidently a very strong presumption that the demand of physiologists for these creatures is supplied by persons who decoy them away from their proper owners, and

that in this way a strong temptation is furnished for actual theft, and all the distress which thefts of this nature too often cause. In answer to a question as to the source of supply, an eminent physiologist said (Answer 2,822) : 'I know as regards rabbits and guinea-pigs, and so forth, that they are drawn from the usual sources, that they are bought in the market.' But when asked especially as to dogs and cats, he replied (Answer 2,823), 'I cannot tell you where they come from. There is no proper provision in this country by which one can obtain dogs, even for the most legitimate purposes, and, of course, I am not informed as to the way in which they are obtained. They are always paid for at a proper price.' And another equally eminent witness, who had told us that in some two or three series of experiments on the cholera poison he had used considerably more than ninety cats, that being the number which he used (Answer 5,747) in one of those series of experiments only—replied to a question touching the source of supply. 'They are supplied to me by a man;' and when further asked whether the person referred to obtained them in a legitimate way, he answered, 'I make no inquiries' (Answers 5,734, 5,735). It would appear, therefore, that however painless the investigations conducted on dogs and cats may sometimes be, there is a special abuse to which even such painless experiments are liable, of a kind not affecting the experiments on rabbits and other creatures, of which there is a sufficient market supply at low prices, namely, that the former furnish a strong motive for an illicit trade, not only degrading in itself, but causing frequently great distress to the owners of the creatures decoyed away. The second reason for this restriction, with which our evidence has furnished us, is contained in an answer of Dr. Anthony, the pupil and dissector of Sir Charles Bell, who, when asked whether the domestic animals are not liable to that special sensibility or 'hyperæsthesia,' to which civilized men appear to be so much more subject than barbarous tribes, replied (Answer 2,596), 'I am inclined to think so, that you have brought both under the influence of what you may term civilization.' It is true that the same witness told us, with obvious justice, that even in the same species you would find some creatures of very low, and others of very high sensibility, and that, in his opinion, intelligence might be taken as almost a measure of sensation (Answer 2,598) ; but as it will be impossible to draw fine distinction in such cases, even if the other reasons affecting the question admitted of any such distinctions, and as it is notorious that no class of animals otherwise convenient for experimentation contains so many creatures of high intelligence, and therefore probably of high sensibility, as dogs and cats, it seems to me desirable, in consideration of this special sensibility, to exempt these members of our households from all liability to such experimentation.

"A third reason for this exemption seems to suggest itself from the very nature of our relations to these creatures, which we have trained up in habits of obedience to man, and of confidence in him, so that there is something of the nature of treachery as well as of insensibility to their sufferings in allowing them to be subjected to severe pain even in the interests of science. No doubt it is the intention of the measure we have recommended to reduce animal suffering to a minimum in all cases ; indeed, I may be allowed to say that the measure proposed will not at all satisfy my own conception of the needs of the case, unless it results in putting an end to all experiments involving not merely torture but anything at all approaching it ; for where the pursuit of scientific truth and common compassion come into collision, it seems to me that the ends of civilization, no less than of morality, require us to be guided by the latter and higher principle. But as there is no mode by which the discretion of the licensee, so long as he continues to hold his license, can be limited, I think we must assume that the subjects of these experiments will continue to be liable to a greater or less degree of suffering ; and that we should try to diminish the evil involved in the infliction of that suffering to its lowest point. And if suffering is to be inflicted at all, with whatever humane economy it is meted out, it is better both as regards the evil of enduring and the evil of inflicting it, that the humble friends of man, which have been taught to obey and trust him, should not be selected as the victims. I may add that I do not find any trace in our evidence that there is a single one of the important scientific discoveries which have been represented

to us as due to, or as finally verified by, experiments of this kind, of which science would have been deprived had any such limitation as this been at the time in force.

* * * * *

"I know of but one serious objection to this proposal. It has been urged upon me that by drawing a distinction in favour of certain classes of animals, the legislature would be taking a step in the wrong direction, since all humane people are desirous to see the Cruelty to Animals Act (commonly called Martin's Act), which at present protects domestic animals only, extended to wild animals ; whereas the adoption of such a restriction as I have suggested would furnish, it is said, a new excuse for leaving wild animals unprotected by law. I cannot see the force of this objection, which, if it were valid, would be a very serious one, since I strongly desire to see the scope of Martin's Act extended so as to include creatures of all kinds. We should not, I think, be the less anxious to guard the less sensitive creatures from torture, because we had put the more sensitive under special safeguards. It seems to me that creatures bound to us by special ties may well and safely be permitted special privileges ; indeed, that the tendency of any measure which recognized more explicitly the claims of our family dependents to be specially guarded from anything like hostile treatment, would have a generally humanizing influence on social manners, and improve instead of deteriorating the treatment even of wild animals."

"EXPERIMENTS ON LUNATICS."

The following important letter wrote on this subject, appeared in the *British Medical Journal* on the 25th ult :—

"SIR,—I cannot think you would intentionally misrepresent my statements in the *Daily Chronicle* ; but those of your readers who have had the opportunity of seeing Dr. Berkley's paper in the *Bulletin of the Johns Hopkins Hospital* for July, 1897, entitled, "Study VII. Poisoning with Preparations of the Thyroid Gland," would gather from your criticism that I had been guilty of a very serious falsification of Dr. Berkley's article. Dr. Berkley says : "It was therefore directly for the purpose of ascertaining the toxicity of one of the best known varieties of the thyroid extract that the following series of experiments was undertaken. The first portion of the investigation was made upon eight patients at the City Asylum, who, with one exception (No. 1), had either passed or were about to pass the limit of time in which recovery could be confidently expected." These were experiments in poisoning incurable lunatics, if we can trust Dr. Berkley's own words. After detailing the serious consequences of the administration, he says (p. 138) : "Two patients became frenzied, and of these one died before the excitement had subsided, the immediate cause of the exitus being an acute disseminated tuberculosis." On p. 139 the author says : "The above experiment upon eight human subjects points out conclusively that the administration of even the very best and purest of the commercial desiccated thyroid tablets is not unattended by danger to the health and life of the patient."

"I submit, with all respect, Sir, that these "experiments" were undertaken not with a view to cure the patients, as they were declared to be incurable, but for the purpose of testing the toxic action of the thyroid extract when pushed to a dangerous point. As I read the report, it appears to me that it was a study of poisoning "as a poison might be tested on an animal," to use your own expression. In proof thereof I notice that Dr. Berkley says : "These results obtained, we then decided to further pursue our experiments upon the lower animals."—I am, etc.,

EDWARD BERDOE, L.R.C.P. Edin., M.R.C.S.,

Victoria Park Gate, N.E., Sept. 17th.

"* * We gladly acknowledge the courtesy and fairness of Dr. Berdoe's letter ; and we will go so far with him as to admit that Dr. Berkley's paper in the *Bulletin of the Johns Hopkins Hospital* (July 1897) seems to us to need some explanation. But we would again say that the use of thyroid extract is recognized as valuable in certain cases of insanity ; that one of Dr. Berkley's patients appears to have been cured by it ; and that the patient who died suffered from acute tuberculosis, and died from this disease seven weeks after the use of thyroid extract had been discontinued. Dr. Berdoe ought to have mentioned these facts in his letter to the *Daily Chronicle*.

CORRESPONDENCE.

MONSIGNOR VAUGHAN AND THE GADARENE SWINE.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Will you kindly allow me space in your columns to express what I felt on reading in your last the paragraph in Monsignor John S. Vaughan's "Thoughts for all Times," touching the scene described in St. Mark's Gospel?

We should be much more inclined to believe in Monsignor Vaughan's fitness to dissertate on "Infinite Love," if he, with his vivisectionist friends, for instance, would offer themselves—as the infinitely higher organized animals—to be experimented on (for the supposed welfare of their human fellow-creatures as also for scientific aims) for every possible disease, instead of leaving the penalty of such tortures to poor dumb animals, who have not deserved them by being disobedient, and who do not share any presumptuous aspiring to explain "Infinite Love," or endeavour to convince us of the utility of unscientific science.

Happily such writings as Monsignor Vaughan's will never succeed in shaking our faith in the tenderness and mercy of our Divine Lord towards all creation, and we positively cannot imagine Him looking approvingly or calmly on at the work of those devils in the laboratories. Also we cannot think that Monsignor Vaughan's written opinions in this matter will conduce to the glory of the Roman Catholic Church. Quite the contrary.—Yours truly,

K. D.

"SEMPER EADEM."

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—If the justness of the well-known *device*, which the Papacy confidently claims as one of its most distinguishing merits, and as especially befitting its unchanging character, may well be disputable as regards its *dogmata*, there can be no sort of doubt, most unhappily, that the *device* is but too well merited as regards its attitude to the *secular* virtues of justice and compassion. "Always the same," whether studied in the character of the ruthless exterminators and torturers of its heretical enemies, or as the exponent of "Catholic" ethics—in particular, so far as the *extra-human* races are concerned.

It is but two or three years ago that a manual of Morals (for the younger members of the English papal body, presumably) was put forth by a professor of ethics in the Jesuit College of Stonyhurst (which bears the *imprimatur* of their Supreme Pontiff). In this authoritative manual of moral dogmas the now notorious repudiation of any sort or degree of obligation to just treatment of the extra-human races was expressly, explicitly, and even cynically declared. In fact, the writer went so far in audacious contempt for the higher religion and for the higher morality as to assert that the human tyrant need be no more regardful of their sensitiveness than if they were "stocks and stones" (such is his own expression). Nor does he make any exception even with respect to the *most highly organized and most sensitive* of the subject species who, confessedly, are as sensitive to physical pain and suffering as, or sometimes even more so than, the average human animal.

A work of still higher authority, published within recent years, "The Catholic Dictionary," maintains the same *thesis* with equal confidence. The latest pronouncement from the dignitaries of the Papacy seems to be that of Monseigneur Vaughan, quoted in the columns of the *Zoophilist* for September. A re-affirmation of the constant teaching of the doctors of the Papal Church, from Thomas of Aquinum downwards, but made yet more shocking for all persons of true feeling by its *nauseous jocularity* of tone.

That there are a few "splendidly false" to the teaching of their Church (in this respect), among the laity, does not alter the fact of the *constant attitude* of their Church. The moral is plain.

Faithfully yours,
CRITICUS.

September 14th.

MORE DEATHS FROM HYDROPHOBIA AFTER PASTEURISATION.

News has been received at Shanghai of the death of Mr. Happer, Commissioner of Customs at Newchwang. Mr. Happer died of hydrophobia. As most of our readers will remember, Mr. Happer was bitten by a dog on the 18th of December last, and, accompanied by his wife, proceeded at once to the Pasteur Institute at Saigon, and underwent the usual course of treatment there. Mr. Happer, who was a son of the late Dr. Happer, of Canton, and a brother of Mrs. G. B. Glover, entered the Customs service in July, 1879, and became Commissioner in April, 1889. He was decorated with the Civil Rank of the 3rd class on the 2nd of July, 1893.—*North China Herald* (quoted in *Times of India*, August 25th.)

Il Secolo, of Milan, in its issue of August 25th, announced that on the same morning Angelo Cattorini, aged 78, an agricultural labourer of Samarate, died at the Ospedale Maggiore (Milan) after three days of distressing agony. He was bitten by a dog on the 18th of May last, and showed symptoms of hydrophobia a few days ago. The treatment which he had undergone at the Anti-rabic Institute of Milan, where he attended for about twenty days, was of no avail. The man has left a widow and three sons.

PROFESSOR CAMPBELL BLACK.

We are pleased to learn that the friends and pupils of Dr. Campbell Black, who was ousted from his Professorship at Glasgow because he dared to be independent and to give free expression to his opinions, are showing their appreciation of him, and at the same time by implication of his enemies. An address of sympathy and appreciation has been prepared, and is being signed prior to presentation. The following is a copy of the address:—

"It is with feelings of sincere satisfaction that we, the undersigned, past and present students of your lectures in physiology in Anderson's College Medical School, Glasgow, have learned of the public testimonial which is now in process of presentation to you in token of the distinguished services which you have rendered to the cause of medicine, and we desire most cordially to identify ourselves with the spirit which has prompted this public recognition of your work.

"As a medical treatise writer your name is already known beyond the confines of Europe.

"As a clever and mordant critic of medical pseudo-science and of professional shams and insincerities you stand easily first in Scotland, if not in Great Britain; and it is a pleasure to us, as future practitioners, to know that the Carlylian vigour, and the witty, trenchant, literary grace, of your pen should be so largely devoted to championing the cause of the younger and struggling members of the profession, and to believe that time will justify your insistence on the necessity of organic medical reform.

"Of transparent candour, sincere in your convictions, an earnest seeker after truth, and tenacious of the true principles of scientific research, scornful of all kinds of dogma, and dauntless in your advocacy of what you believe to be right, it is not possible to hear you lecture without being stimulated to the exercise of independent thought upon the problems of medical science.

"As a teacher in Anderson's College you have endeared yourself to us by the brightness of your individuality, by your originality of thought, and the lucidity of your exposition; by your patience, by your sympathy with us as students, and by your unfailing courtesy; and while we regret the necessity of our parting with you for the present, we have at least the consolation of knowing that, in after life, we shall continue to remain within the charmed circle of your acquaintance through the exercise of your clever, indefatigable, and versatile pen.

"May health and strength long prolong your usefulness to the profession, and an ampler recognition even than that with which you are now being honoured crown your work of the future."

PASTEURISM CRITICISED FROM A NEW QUARTER.

The following, from the pen of M. Charles Dürr, physiological chemist, of Paris, is taken from *Le Médecin*, of Brussels, (September 5th):—

"Here is what MM. Raspail says of vaccination for hydrophobia:—'We have studied the value of the anti-rabic vaccinations and detailed the astonishing results that they have given since they were first applied. Formerly, there died of hydrophobia an average of twenty-six persons per annum; with the method of Pasteur in use this number has been doubled. In the case of his earliest preventive inoculations, Pasteur simply entered into the vast field of experimentation, which, however, soon brought him to grief, smothered up, it is true, by the most enthusiastic eulogies of the unthinking or interested press. Those men who had the courage to speak the truth, with proofs in their hands, were treated as the vile detractors of "the incomparable *savant*." However, M. Pasteur was compelled to recognize the fact that his method, applied even a day or two after the bite, did not prevent the unfortunates, who had had recourse to his inoculations, from dying of hydrophobia. He then announced that he had modified his system, which would this time become infallible. Then the drum-beating in his honour redoubled, the dithyrambic praises were poured out in more prodigal doses than ever, and thus supported M. Pasteur put in practice his new conception, the second and intensive method. The first was not strong enough to prevent those bitten from dying of hydrophobia, the result of the second was to cause them to die more rapidly, but by a new disease, that of paralytic hydrophobia—in a word, rabbit rabies, communicated by the inoculations themselves! For the second time he blundered; for the second time he had made his reprehensible experiments on mankind.'

"It is curious to compare with these facts the logomachy of M. Duclaux:—'There is no other example in science of a scientist who had seen grow and extend so much the domain which he had conquered except, perhaps, Lavoisier, whose name comes at once naturally to the mind when one speaks of Pasteur, who would have had the joy of seeing himself as great, had his career been more extended. But the only adequate likeness is that of a Napoleon dying triumphant in the midst of a pacified Europe. Yet even that comparison, magnificent as it is, may be regarded as incomplete. Pasteur conquered the world, and his glory cost not a tear!'

"It is not possible to utter untruth with greater effrontery. It is true that in France a robust faith obtains. But while Dr. Ferran has been treated as he deserved in Spain, the not less famous Koch, after the fiasco with his lymph, continues to live despised by the public of Germany.

"Why is that? Because there is not found, whether in Spain or Germany, a journal sufficiently dishonest, sufficiently servile, to sustain the deceit and imposture after the manner of Barnum—as happened on the morrow of the denunciation of Pasteur's failures by Professor Peter in face of the Academy of Medicine—to cover the author of such manœuvres with praise, and to brand his courageous critics as vile detractors.

"I am absolutely convinced that neither in Switzerland, Belgium, Russia, or Germany could such a condition of things have been produced without attracting the attention of the chief of the State. But no voice of authority, not even that of doctors, was raised in protest against such unworthy proceedings, under the very eyes of the members of the Academy of Medicine.

"Would you like to know, now, the amount of the annual income which the Pasteurians enjoy as the proceeds of their false discoveries, by their dismal boasts proclaimed in every tone through the public news-sheets of Paris and elsewhere? It is 320,000 francs a year, without counting the proceeds from the sale of vaccine serums, destined to combat or to exorcise all the microbean diseases, that is to say, all maladies without exception, according to the microbomaniacs.

"It is for you now, the supernumeraries of that unhappy man, scientific and political writers—in token of new found grace—it is for you to exculpate your master, for you to demonstrate that my criticisms are exaggerated; for you

to prove, otherwise than by new and untruthful syntheses, or sterile declamations, that during the whole of his career Pasteur had not hoaxed his colleagues of the Institute and the scientists of the world at large."

THE "TIMES" ON THE BRITISH MEDICAL ASSOCIATION.

(FROM THE "CHEMIST AND DRUGGIST," SEPTEMBER 4TH.)

The British Medical Association opened its sixty-seventh annual meeting at Montreal on Tuesday last, when the new President, Dr. T. G. Roddick, M.P., of Montreal, delivered the opening address. The *Times* of Wednesday last takes the opportunity afforded by the publication of an abstract of Dr. Roddick's address to criticise the Association in a style which leaves little to be desired in the way of severity. "Dr. Roddick," says the leading journal, "fell into a not unnatural mistake when he dilated upon the power and influence of the Association over which he has been called upon to preside; the truth being that the absence of such power and influence is one of the most remarkable characteristics of the organisation." After explaining the constitution of the Association, which at present consists of 12,952 medical practitioners, and has accumulated some £40,000, mainly from advertisements inserted in the *British Medical Journal*, the *Times* asserts that—

"In spite of great and obvious advantages, of a membership of nearly thirteen thousand, scattered over all England and reaching into India and the colonies, in spite of a highly-remunerative weekly journal, which finds its way to medical men all over the world, and in spite of the possession of ample funds, it would be impossible to point to anything which the Association has done, either for the benefit of the medical profession or for that of mankind, at all adequate to the apparent possibilities of the case. Probably no statesman was ever influenced by its views with regard to any matter of legislation, whether purely medical or relating to some one of the many social questions upon which medicine is calculated to throw light. The Association has made some microscopic pecuniary grants for the promotion of scientific research; and nothing very important has ever come of them. Papers on professional subjects are read at its annual meetings, both at the branch meetings and at that of the entire body; but the attendance is usually limited and the discussion perfunctory, the members generally preferring to devote their time to recreative purposes. The scientific work of the profession, the charitable work of the profession, and the defence of the pecuniary interests of practitioners are all mainly accomplished by independent societies which have been called into existence for these purposes."

What makes it worse is that the writer goes on to suggest that the impotence of this most self-respecting body may be due to "the existence of a Council which largely consists of irremovable life members, and which is said to disregard the resolutions and recommendations of branches as completely as if they had never been brought under its notice." We have no brief to speak for the irremovable old gentlemen, but it is due to them to say that it is their inertia which keeps the Association alive. If they were to set themselves to carry out the crazy schemes of legislation which perennially blossom from their branches, the British Medical Association would burn itself out in a few months.

THE DIPHTHERIA OUTBREAK.—Dr. A. Wynter Blyth, the medical officer of health for Marylebone, in his report to the local vestry for July, issued yesterday, comments upon "a remarkable burst of diphtheria which has taken place generally over the metropolitan area," and he adds:—"A number of beds ordinarily used for scarlet fever patients have been utilised by the Asylums Board authorities for the reception of diphtheria patients. The hospitals are practically full, and there is from time to time considerable delay in removals. This fact shows that although the hospitals of the board are each year extending, still the demand exceeds the supply, and the metropolis has insufficient appliances to cope properly with an epidemic of even moderate dimensions."—*Daily Mail*, August 27th.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, FRIDAY, OCTOBER 1st, 1897.

TRUTH OR UNTRUTH.

THE Orator, *par excellence*, on physiology, at the Toronto meeting of the British Association this year, was Professor MICHAEL FOSTER, and probably he considered the charge of untruth which he made against the Anti-vivisectionists one of the points of his address. To avoid mistake or misapprehension, we quote his words as reported in the *Times* of August 20th. They were as follow:—

"That physiology is, and always must be, the basis of the science of healing, is so much a truism that I would not venture to repeat it here were it not that some of those enemies alike to science and humanity, who are at times called Anti-vivisectionists, and whose zeal often outruns, not only discretion, but even truth, have quite recently asserted that I think otherwise."

We pass over the libel that anti-vivisectionists are enemies of science and humanity, and take up the charge of untruth. From the concluding words of the passage we have quoted we conclude that Professor FOSTER—the captain of probably the most numerous vivisectioning crew in the country—refers to words of his which have often been quoted that "You do not want much physiology for an understanding of the principles of medicine and the nature of disease." And further: "Nothing is to my mind more dangerous than the taking, so to speak, of 'raw' physiology at once into clinical work," and "to my mind a great deal of discredit has been thrown upon physiology by these attempts." These statements are quoted from the *Lancet*, of October 19th, 1889 (p. 783), and are part of what purports to be the report of an address delivered before the Medical Society of University College. We are not surprised to see a vivisectionist turn round when an inconvenient saying of his own is quoted against him, and attempt to run away. If, however, there be any untruth in the passages from the *Lancet*—not that we believe there is—it is the affair of the conductors of that journal and not in any way of the Anti-vivisectionists. The truly scientific man should, Professor FOSTER said, exercise his curiosity, and we hope Dr. M. FOSTER will be curious enough to look up the report in question. At any rate, when he makes a

charge of untruth he should discriminate between the original source of the statement he impugns and those who have simply quoted from that source. There is no doubt much more about physiology in the address at University College, but the passages quoted are complete in themselves, and if they were true when Dr. FOSTER—as the *Lancet* reports—uttered them, they are true now.

But Dr. FOSTER, it will have been observed, said the zeal of the anti-vivisectionists "often outruns, not only discretion, but even truth." He may, therefore, have had other charges in his mind—the outrageous charges of Professor HORSLEY, for instance. Now, all, or nearly all of Mr. HORSLEY's charges were based on alleged instances where, in reporting cases of experimentation the statement that anæsthetics were used had been left out. These omissions were freely and elegantly denominated "lies." People who make charges of this kind should come into court with clean hands. Dr. FOSTER lumps the Anti-vivisectionists together, and we lump the Vivisectionists together, and say they have not these clean hands. There is an exactly analogous case of recent date. In July last Dr. BERDOE revealed in the *St. James's Gazette* the fact that Mr. LEONARD HILL, now a Professor at the London Hospital, had reported experiments in which he said, "throughout the experiments morphia was the anæsthetic used." When this was pointed out, and also the fact that morphia was not a true anæsthetic, Mr. HILL wrote to say that he used chloroform also. He implied that it was an omission only. Is this by the vivisectionists' rule as applied to their opponents, to be assessed as truth or untruth? And are not the vivisectionists dwelling in a glass house?

That the vivisectionists are not immaculate, we have Dr. FOSTER's authority for saying. There is a commercial spirit among the distinguished scientists who embark in research, and, it appears, a danger of their selling themselves for gold. Let us hear Dr. FOSTER himself on this. According to the report in the *Times* he said:—

"There is an increasing risk of men undertaking a research, not because a question is crying out to them to be answered, but in the hope that the publication of their results may win for them a lucrative post. There is, moreover, an even greater evil ahead. The man who lights on a new scientific method holds the key of a chamber in which much gold may be stored up; and strong is the temptation for him to keep the new knowledge to himself until he has filled his fill, while all the time his brother-inquirers are wandering about in the dark through lack of that which he possesses. Such a selfish withholding of new scientific truth is beginning to be not rare in some branches of knowledge. May it never come near us!"

Then these men have the failings of other mortals! They are selfish and anxious for gold. No doubt very common human failings, but the vivisectionists, to hear them at times, set up to be a class apart, to be pursuing science for its own sake. Really, if Dr. FOSTER has not made a discovery that the reverse is the case, he has made a revelation. The "nobility" of the physiological scientist seems at length to be admitted by their chosen orator to be not above the average of that with which

mankind at large is endowed, and therefore we need not regard him very much when with his unclean hands he poses as a judge of truth or untruth.

As to the substance of Professor FOSTER's address "On the Progress of Physiology during the last thirteen years," it reminds us of a famous passage in CARLYLE's letter by EMERSON, viz. :—

"It is easy to screw one's self up into high and ever higher altitudes of transcendentalism, and see nothing under one but the everlasting snows of Himalaya, the earth shrinking into a planet, and the indigo firmament sowing itself with daylight stars; but whither does it lead? One dreads always to inanity and mere injuring of the lungs."

This exactly expresses the feeling with which we rose from the perusal of Dr. FOSTER's address. The EDITOR of the *British Medical Journal* seems to have been affected by it in a very similar manner. It was "concerned with facts not with products and profits," another way of saying "Mouths full of promises, hands empty of results." We are told that it is our duty to "uphold physiology for its own sake, as pure science, apart from its gifts to medicine and surgery." There was once a learned society which at its dinners used to drink the toast of "Pure Mathematics! And thank God they were never of any use to anybody." Dr. FOSTER regrets that the dominant note of the activity of the age is "so commercial." Everybody presses forward for large or quick profits. "We have no right," says the *British Medical Journal*, "to blame physiology, as its opponents measure it, by its direct applicability to practice, or to demand immediate results from it, so much new treatment of disease in return for so much experimental work, or to put ourselves first and the men of science second." So transcendental were the views of the PROFESSOR that the EDITOR of the Journal was fain to confess that he could not climb the giddy heights of the Himalayas the physiologist had ascended. "We who run the race of practice cannot read diagrams of this sort; we are like a famous art critic, who became entangled in an after-dinner discussion on the Eastern question. 'But I don't know,' he said plaintively, 'I don't know where Bulgaria is.' Modern physiology, that is to say physiology *in excelsis*, has spread beyond the reach of the busy practitioner; like ANDRÉE's balloon it is seeking the North Pole and is far beyond the busy haunts of men where doctors heal the sick and bind up the wounds of the injured. The doctor has to take his patients as he finds them, men and women, not bundles of nerve fibres, nuclei, and cells. "Whither does it lead?" we ask with CARLYLE. "Don't be so meanly commercial," replies our PROFESSOR.

SANITATION AND THE LOWERED DEATH-RATE.

WE were glad to see that at the recent Sanitary Congress no less an authority than Dr. FARQUHARSON, M.P., who is the President for the year, made much of the improvement in the public health due to advanced methods of sanitation. We have often alluded to this

topic, and pointed out that the lengthened duration of life is far more due to the brightening, cleansing, and purifying of the surroundings of the inhabitants of these kingdoms than to any knowledge gained from the illicit researches of the vivisector. Dr. FARQUHARSON remarked that the death-rate per cent. had been reduced in the last quarter of a century from 22 to 18 per annum, "by the joint labours of sanitarians in the prevention of disease, and of doctors in curing it." We do not deny all credit to the medical profession in this connexion; no doubt they render great service in assisting, by rational and reasonable treatment, to recover health for many persons stricken with disease. It is noteworthy, however, that Dr. FARQUHARSON gives the first place to improved sanitation as a life-saving instrument, and no doubt it is entitled to it.

To sanitary science alone he attributed "the effect of bringing about a diminution of fever and smallpox," and this is very important, as there was no allusion whatever to the modern rage for what is called bacteriology, and the practice of inoculating diseased animal substances into sick human bodies, which is at present so all-pervading a mania amongst the scientist portion of the medical profession. While, however, he was able to say this of the two maladies in question, Dr. FARQUHARSON stated that "other diseases had increased," which was another implication that the fussy bacteriologists had failed. It is important to us to have these admissions from such a quarter, because their author is the reverse of an anti-vivisectionist. That they are quite honest is beyond question, but it is very remarkable that Dr. FARQUHARSON left out all mention of the exploits of the animal experimentalist. Amongst the other diseases which had increased, Dr. FARQUHARSON mentioned nervous diseases, including lunacy; and this is a very melancholy fact. It is also one which ought to teach the vivisector modesty and the uselessness of his methods.

We are constantly hearing much at medical congresses and meetings of psychology; but it seems as if little or nothing was gained by means of that science, if it be one. The reason of men and women becomes deranged, and they are immured in asylums, where they are dieted and made to live healthy lives. The insanity of some depends, it may be, on bodily ailment, and here medicines may be of avail, removing the physical and mental infirmity by the same process. But when it comes to psychology—the science of mind—pure and simple, the question put by SHAKESPEARE, "Who can minister to a mind diseased?" remains very much the insoluble problem it was in his time. According to Dr. FARQUHARSON the new and rising generation is an anæmic one—"a glance at the cheeks of the rising generation must convince us that this increase of pallor is only too real." Now, here is a problem apparently rather physiological than psychological, to which the intelligent non-vivisectioning scientist may usefully direct his attention. The vivisector seems to regard the brain of inarticulate animals as the place in which to find

knowledge as to the mind of man; but, no doubt, he is misguided on that point. The right thing would be to study, and, if possible, find out the cause for the pallor, the anæmia which Dr. FARQUHARSON said prevails in the rising generation, and when found to devise a remedy for it. There have been pathologists in asylums in the past, and there are now, but yet Dr. FARQUHARSON tells us—and he ought to know—that diseases connected with the nervous system are increasing. The inference is that hitherto researchers have been on the wrong tack.

A topic like this rightly came within the scope of an address on sanitation, because sanitation is a broad and powerful method of disease prevention. What is most desirable is that the populations of these realms, and indeed all others, should be put in a position to guard against becoming pallid, anæmic, nervous, and insane, and in order to do this the science of prevention should be carried further. The true inquirer, though baffled oft, is never defeated, and we trust that one outcome of this year's Sanitary Congress may be that more men will devote themselves to the important point raised by Dr. FARQUHARSON, in the way of legitimate research, and ultimately bring in the era of the lowest death-rate of 14 or 15 per cent. per annum, which he conceives to be possible.

OUR CAUSE IN THE PRESS.

THE MEDICAL PROFESSION WRONG ON VIVISECTION.

The editor of *To-day*, in answering a correspondent in his issue of September 4th, wrote as follows:—"I cannot admit that a medical man can approach the subject without prejudice. It would be against human nature for him to do so. The question of animal life does not enter into the thoughts of the more moderate opponents of vivisection, as I have often said. I am confident the medical world might bring death to ten thousand animals a day in every one of its schools without raising the indignation that the physical torture of a single guinea-pig produces. Cruelty we unscientific people regard as a thing that there is no excuse for under God's sun. It is a thing of hell; and even had mankind benefited from it—about which there is as much argument on one side as the other—the only answer would be, So much the worse for humanity. If there be justice under Heaven, it will pay the price for what it has gained by thus outraging the laws of God. Even the grafting of a disease upon animals might pass unprotested against were that all that vivisection meant—would to Heaven that it were! Your analogy between vivisection and your treatment of children is utterly false, to my thinking. You inflict hurt upon the child to benefit the child. You torture a dog to death hardly for the benefit of the dog—do you? You could not bring yourself to do it even in the interests of science until you had case-hardened yourself against all humane instincts. Do medical men really think upon this subject? The great majority of you never practise vivisection as we are discussing vivisection now. Few of you have ever even seen vivisection in anything but its mildest forms. You have been bred and educated to the belief that it is necessary to medical science, and your *esprit de corps* prompts you to defend it. Occasionally you meet a vivisector who has polished manners and a soft voice. No doubt Spanish society in the Middle Ages found the Grand Inquisitor a most humane and excellent gentleman, and would have been indignant at the names we now apply to him. The Church then argued as you, perhaps, argue to-day, that cruelty was necessary to the salvation of humanity, that they were only doing evil that good might come, and they were as sincere as you are. I am always sorry if I give offence to my medical

readers and friends. I know of no profession that contains within its ranks a larger proportion of high-minded and unselfish men, and doctors I know personally are among the men I most admire. But on this subject of vivisection the medical profession is wrong, and if it could and would look at the matter from an unprejudiced point of view, it would see in a moment it was wrong."

UNDER CHLOROFORM FOR HOURS.

(FROM THE "SUNDAY TIMES," SEPTEMBER 5TH.)

MADAM,—Dr. Samway's reply to Miss (not Mr.) Woodward's questions, however interesting in itself, is not satisfactory, because the questions concerned a dog, and the reply deals with a human patient. It was asked if it were possible to keep a dog unconscious under an anæsthetic for eight-and-a-half hours, and would the animal be free from pain after a long and severe vivisection? To this Dr. Samway says he saw a case in which a woman was kept in a state of unconsciousness for twelve hours, during four-and-a-half of which she was under an operation, and that the patient recovered without pain or untoward symptom. Now we have it on the testimony of the highest experts that chloroform is very dangerous to dogs. Mr. William Pritchard, late Professor at the Royal Veterinary College, told the Royal Commission: "With regard to dogs, I should never think of applying chloroform at all; I should think it very unsafe to do so. The dog has an intermittent pulsation; the heart's action is intermittent." Mr. E. H. Hoare, F.R.C.V.S., in the *Veterinary Journal* (No. 219, p. 163) referring to the use of anæsthetics on animals said: "In many instances respiration ceases almost without any preliminary warning, and in some cases death occurs with such rapidity that it would appear as if syncope was the cause." Again, in the "Pathological and Physiological Researches" of the late Mr. T. R. Lewis, Assistant Professor of Pathology in the Army Medical School, the experimenter laments the fact that chloroform is so very fatal to rats and rabbits, as also to puppies and young dogs, and he says: "Even in large healthy dogs we calculate on losing one in five through this cause alone." The loss of the dogs would be unimportant, but the spoiling of a complicated and difficult vivisection by the sudden death of the animal would be extremely provoking to the experimenter. As to the after-consequences we must bear in mind that there is all the difference in the world between a carefully planned surgical operation for the patient's benefit and a vivisection undertaken for mere purposes of observation. In vivisections I could mention, lasting many hours, the chest was opened by cutting through the ribs, ligatures were placed upon nerves which were stimulated by electricity, the spinal cord was exposed and stimulated, the throat cut and artificial substituted for normal respiration, etc., and then observations were made on the animal. Now we do not proceed just like this in surgery. We do not usually force the ribs back and expose the heart, the kidneys, and intestines all in one operation, but such things are regularly done in the vivisection laboratory. I do not consider, therefore, that Dr. Samway's reply to Miss Woodward is an answer to her questions.—I am, Madam, yours, etc.,

August 23rd.

EDWARD BERDOE, M.R.C.S., etc.

THE VIVISECTOR'S CATECHISM.

(FROM THE "SUNDAY TIMES," SEPTEMBER 12TH.)

MADAM,—I fear that your correspondent, Mr. Burton, is troubled with a little intellectual photophobia; the rays of my searchlight are too much for him. A sailor, hailing from the port of London, was asked in the Bay of Naples by a lady passenger if he did not enjoy the beautiful blue sky after the smoke of the English metropolis. "No, ma'am," he replied: "give me a good Thames fog; this ere blue sky is too dazzling!" I have provided Mr. Burton with good illustrations and quotations from scientists pat to the point; he does not appreciate them; he blinks his eyes. I am sorry the light annoys him. I quoted Sir Charles Bell's own words, to the effect that none of his discoveries were the outcome of vivisection, but that when his professional brethren disputed his facts he had been driven to demonstrate them by experiments.

Instead of candidly accepting this proof, Mr. Burton, in what I must call a most disingenuous manner, so unworthy of a dignified scientific controversy like ours, cries out, "Ah, he did vivisect, you see; your great pillar has fallen!" This is an argument *ad captandum vulgus*, which is a novelty in my experience. Mr. Burton accuses me of want of candour in not quoting Dr. Welch's statement that curare relieves certain forms of spasms. But I was quoting Dr. Welch's remark that this drug is not an anæsthetic. I was not dealing with its uses in tetanus, hydrophobia, or colic. That is a horse of another colour. It is a pity Mr. Burton assumes such an air of medical infallibility. "There can be no doubt," he says, "that the poison was curare." Oh, but there is! Many medical men have expressed such a doubt. In the "Extra Pharmacopœia," by Martindale and Westcott, page 186, under the head "Curara," we read that curara is "a generic name for various poisons." The arrow in question was poisoned with something, the composition of which is not known, and I have as much right to doubt that it contained curarine as Mr. Burton has to protest that it did. Your correspondent says that we owe the introduction into therapeutics of thyroid extract to vivisection, and vivisection alone. I dispute this. Dr. Murray, of Newcastle, discovered, but not by vivisection, that the injection of the extract of the thyroid gland into myxœdemic patients would improve the health. Mr. Horsley made a number of experiments on animals, and discovered that he could cause the disease, but it was Dr. Murray by his clinical researches who taught us the relief of myxœdema.—I am, Madam, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

EXPERIMENTS ON LUNATICS AND HOSPITAL PATIENTS.

(FROM THE "DAILY CHRONICLE," SEPTEMBER 17TH.)

SIR,—Experimenters must be watched on this side of the Atlantic as well as on the other. There are others besides lunatics who claim our protection. Hospital patients, who are absolutely ignorant of what is being done to them, are just as fit objects for protection. In the *British Medical Journal* for July 17, 1897, p. 150, we learn three distinct statements in one short paragraph. First, that two doctors on the staff of a London hospital "have been continuing an attempt to discover whether it be possible to obtain an anti-toxin for cancerous diseases." Let me point out that no remedy is claimed, but merely an attempt to discover whether a cure of a certain nature could exist. Secondly, that hitherto the experiments have been tried on horses, and that "the work has been delayed on account of the loss of two horses, on which the plan of intra-venous injection was adopted." Thirdly, that "they hope in the autumn to try the value of the serum on selected inoperable cases of malignant disease in man." This is pleasant reading. A substance, the possible benefit or injury of which no man can calculate or hint at, and which has already done to death two horses, is to be inoculated into man. The danger of the experiment is apparently realised by the fact that the "selected" objects are men doomed to death, men whose last moments should be soothed by narcotics, not possibly made more awful by experiments. Again, in a recent volume of the *Journal of Physiology*, vol. xx., pp. 82-96 (for the year 1896) is an account of experiments on three Edinburgh patients, in which the most alarming claim to proprietary rights over infirmaries and hospital patients is put forward in the following words:—"The subjects of observation were patients in the Royal Infirmary and Chalmers Hospital, and I am indebted to Dr. James and Dr. Muirhead for putting them at my disposal." Can it be that it is intended to select these cases from the same source—infirmaries and other hospital patients? If so, the sooner the public understand it the better. Seeing that we are threatened with these experiments in the autumn ("hope" is the feeling expressed); seeing that the autumn is upon us, however pure the intentions of the experimenters may be, it will surely do no harm to ventilate this subject as a safeguard, and to the public, who support hospitals, an opportunity of speaking with no uncertain voice on the subject of hospital experiments.—Faithfully yours,

LIONEL S. LEWIS.

156, Cambridge Street, S.W. September 13th.

HOME INTELLIGENCE.

LONDON.

LECTURE BY MR. R. S. WOOD.

On Friday night, September 10th, at the office of the *Review of Reviews*, Mowbray House, with Mme. E. S. Gaskell in the chair, a most convincing lecture was delivered to the Women's International Progressive Union by Mr. R. Somerville Wood, M.A., on the subject "Is Vivisection Justifiable?" Besides the founder of the Union, Mdle. Adrienne Veigéle, Miss Eliza Righetti (hon. assistant secretary), and Mme. Gaskell, there attended Dr. E. Haughton, Mr. Tasset (Orientalist), and a few others, so that though numerically limited, the audience was an influential one.

Mr. Wood declared himself at the outset to be an anti-vivisector. He quoted Mr. Lecky as saying that it was only during the last few years that the relations of men towards animals had come within the sphere of ethics. Recently a great spirit of humanitarianism had sprung up, having among its other results the Martin Act, which made it penal to inflict unnecessary ill-treatment on animals. But Mr. Wood maintained that the utility of the Martin Act was spoilt by the fact that whereas the costermonger was very properly punished for starving or misusing his donkey, the scientific man in his laboratory was allowed to perpetrate far greater horrors without remonstrance. Their attitude towards vivisection had been opposed chiefly because the end which vivisectors were understood to have in view was the general benefit of the community. He denied not only that the community received benefit by the experiments, but that the vivisectors had any such purpose in view. The plea of utility would be laughed at on the Continent. There it was openly avowed that the primary motive of vivisection was the acquirement of knowledge. After referring to Dr. Koch's cure for consumption, which proved a failure, the lecturer remarked that the degrading influence of vivisection upon the national mind was inevitable. He knew for a fact that a large amount of experimentation took place yearly upon human beings in hospitals, as a direct result of animal vivisection. From the *British Medical Journal* Mr. Wood cited a case where the cure of a patient was delayed in order to demonstrate that the disease if left to nature would not improve of itself. What right had those doctors to prolong any person's agony in illness? Talking to a lady—of course in affluent circumstances herself—he had heard her say that it was only right that the poor, who received free attention at the hospitals, should do something to pay for it!

A discussion followed.

DUNDEE.

The Sanitary Association of Scotland held its Congress at Dundee on the 26th and 27th of August, when Dr. Charles Templeman, Medical Officer of Health, Dundee, read a paper on the subject of "The Prevention of Disease by Methods of Inoculation." The paper gave rise to considerable discussion in which the author's arguments in favour of inoculative methods were keenly opposed by Councillor Waterston, Edinburgh, who declared that sanitation, which made better homes, cleared out slums, and had given us a better water supply and improved drainage, had done far more to lengthen life than any scientific research.

MACCLESFIELD.

ACTIVITY OF THE LOCAL BRANCH.

Mr. T. A. Williams, lecturer of the Bristol and West of England Society, spent the week ending September 18th in Macclesfield, where he spoke several times daily. Under the auspices of the local society the Macclesfield Working Men's Branch held one of the series of meetings in the Park Green Schoolroom. Previous to this an open-air meeting had been held on Park Green, and invitations extended to all present to take part in the schoolroom meeting, where the chair was occupied by Mr. Chubb, hon. secretary to the branch, who briefly introduced the lecturer to the meeting. In the course

of an interesting address Mr. Williams pleaded for justice to animals, and pointed out that although experiments might not all take the form of cutting and carving, still, if only a pin prick, it caused pain, and, if followed by inoculation, might lead to further developments of a serious nature. In concluding, he declared that the man who made the first drain pipe, and the philanthropist who gave parks and grounds for recreation did more to raise the standard of health than all the discoveries of vivisection. At the close of the address a series of limelight pictures were shown on a screen, illustrating the cruelties of vivisection. The following resolution was proposed by Mr. Joseph Harvey, and seconded by Mr. W. H. Mason:—"That this meeting of residents of Macclesfield believes the practice of experimenting on living animals, known as vivisection, to be cruel and degrading, and that many high medical authorities, who declare the practice useless and dangerous to the healing art, desire to see it prohibited by Act of Parliament." After this had been put and carried, the meeting was brought to a close.

THE SCOTTISH SOCIETY. MEETINGS AT BRECHIN.

On Sunday, the 19th September, Colonel Waterston, secretary of the Scottish Anti-vivisection Society, visited Brechin, Forfarshire, and held a series of meetings. In the forenoon he lectured in the Congregational Church; at 6 p.m. in the East Parish Church, when he was assisted by the Rev. Robert Paisley, the minister of the parish; and later in the evening he addressed another meeting in the Temperance Hall, when he was assisted by the Rev. Alexander Mitchell, the Congregational minister. In all the gatherings there were large congregations, who listened with great attention, and at the close of each a large amount of literature was circulated. Bailie Spence and Councillor Laing, members of the local Society for the Prevention of Cruelty to Animals, took great interest in the getting up of the meetings.

Arrangements were made for the circulation of literature among the clergymen and other leading citizens in the town.

FOREIGN INTELLIGENCE.

FRANCE.

ALARMING INCREASE OF HYDROPHOBIA.

M. Lépine, Prefect of Police, has just addressed to the Police Commissaries of Paris a circular, the object of which is to put an end to the increase in the number of cases of hydrophobia among dogs, which has become rather alarming recently. The Prefect reminds his subordinates that a special service, under the direction of the chief Veterinary Surgeon of the Prefecture of Police, has been established at the Pound in the Rue de Pontoise, where dogs can be examined, and *post mortem* examinations can be made of animals suspected to be afflicted with rabies. This service is absolutely gratuitous. The Police Commissary of the quarter where the presence of a mad dog has been notified to him should take rigorous measures to have every dog or cat suspected of having been bitten by the animal at once killed. These functionaries are also ordered not to allow any private person to kill and bury any animal suspected of hydrophobia without having had it examined by the police authorities. It appears from the annals of the Pasteur Institute, just published, that hydrophobia is considerably on the increase in the provinces. In a small number of departments cases of hydrophobia have diminished, thanks to the energetic measures taken by the authorities. In several others there is a great and constant increase in the number of persons bitten by mad dogs and sent to the Pasteur Institute. Notwithstanding that the South of France sends a growing number of patients to the Pasteur Institute, it is Paris which furnishes that establishment with the largest number of patients.—The *Standard* Paris correspondence, August 31st.

INDIA.

A PASTEUR INSTITUTE AND THE ROYAL DIAMOND JUBILEE.

The introduction of the accursed system of vivisection into India is going to be specially associated with the name of the Queen and her Diamond Jubilee. The Rana of Dholepore had it put into his head that it was incumbent on him to commemorate the Jubilee by establishing a Victoria Pasteur Institute. It is said that already eighteen Indian Chiefs have signified their adherence to the proposal. The matter is more than explained, when we learn that Professor Haffkine has been lately staying with the Rana of Dholepore, and doing his best to convince the simple Prince that the regeneration of India depended on the establishment of an Institute of the kind, where the Professor can carry on the so-called "scientific investigation of diseases," and have ample funds at his disposal to feed his bacteriological fads. We must enter an earnest protest against the Rana of Dholepore's project, which is based on a wanton disregard of the clearest principles of humanity.—*Indian Mirror*, Calcutta.

FAILURE OF YERSIN'S PLAGUE SERUM.

A few months ago, when Drs. Wyssokowitz and Zabolotny announced that the use of Yersin's serum at Bombay had reduced the mortality from the plague from 80 to 40 per cent., i.e. by one-half, we expressed some doubts on this subject (the *Medical Week*, July 23rd, 1897). It appears now from Prof. Metchnikoff's statements that the reduction is not to 40, but to 49 per cent., that is to say, three-eighths, instead of one-half. Nevertheless, if the mortality from the plague has really been lowered by three-eighths through the use of antipestous serum, these results would certainly be very encouraging. The curious part of it is that this beneficial action has passed unnoticed on the spot, our correspondent at Bombay, who is chief medical officer to one of the hospitals at that place, writing under date of July 30th last: "Nothing more is said of Dr. Yersin, whose treatment, I find, is entirely discredited here by the medical profession and laymen alike."—The *Medical Week* (September 3rd).

THE REPORT OF THE PLAGUE COMMISSION.

Mrs. Sarah D. Gostling, of Palli Hill, Bombay, in a letter in the *Advocate of India*, August 26th, comments on the above-named report, summaries of which appeared in the English press early in August, in the following terms:—"It certainly is news to us in Bombay that the Plague Commission in India was under the direction of Professor Koch, for do we not know that he came from the Cape here to discover the rinderpest microbe which he failed to discover at the Cape? And we also know that Professor Haffkine has been the director of the Plague Commission and has been working away very vigorously in discovering the plague bacillus, but it is rather disappointing to find that this bacillus is so tough that it can only be killed by 'sublimates at boiling temperature,' or 'mineral acids' or 'carbolic acid,' all of which are too strong to be taken by any patient inwardly. However, why may not all this impress a lesson on us and on our Municipalities—the great necessity of sanitation, and perhaps it would have been more instructive and useful had the composition of the contents of the Mandvie drains been analysed and the rats left alone a little more as far as experiments went. All energy seems to have been devoted to experimenting on sick rats instead of finding out what caused the rats to sicken and die and why they fled out of their usual habitat—the drains. According to a London telegram, the report is called Professor Koch's report and this report, be it observed, only gives a passing notice of Professor Haffkine and his inoculation system, which, we are told, was 'applied to 1,400 patients in consequence of which a number were taken ill,' and, we can add, a good many died. From the official report just issued here we find that in the Brahmapuri Plague Hospital in Bombay, out of thirty patients inoculated with Dr. Haffkine's anti-serum only ten survived, a poorer result than that shown by some of the other hospitals. So much for inoculation.

Now let us see what pure air can do, and I take the words of the Commission. They 'observed only isolated cases of illness among people camping in the open, while among those who had remained indoors the epidemic continued its ravages without abatement.' Pollution from defective drainage and bad sanitation is really what we have after all to reckon with, and this is the great lesson the microbe and bacillus theory has taught us and for this we thank our experts; only let them throw all their inoculation serums and virus into the sea."

AMERICA.

VIVISECTION CRUELITIES IN THE STATES.

The following, which, as will be seen, is not the opinion of one opposed to all vivisection, was contained in a letter written from Washington to Mrs. Lovell by Dr. James P. Hawes of New York State. In referring to cruelties he had seen in medical colleges, he says:—"Here in Washington some years since, in addition to the practice of other cruelties, they were very anxious to find an absolute antagonist or antidote to strychnia poison. The poor creatures received an enormous hypodermic of strychnia in one side of the body, and four times as large a dose of chloral hydrate in the other side. The effect was extreme agonizing suffering, contractions, spasms, moans, and death in nearly all. This would last for hours, and what did it prove? Nothing. In a few of the arguments for unrestricted vivisection and experimentation, the assertion is made that 'it is better for mice to suffer than man.' Very true, if it brought actual knowledge. Let me demonstrate. We give a little mouse one-tenth of a grain of strychnia, atropia, or any powerful alkaloid. It may barely live. Now the little mouse weighs 240 grains. The adult man weighs 3,600 times as much, and therefore receives 360 times as much strychnia as the mouse, or 36 grains! This is mouse science applied to man. Ridiculous to think of! In every law or general truth there are one or more exceptions, and upon the small per cent. of exceptions we are met by the unrestricted advocate. In Philadelphia, Pa., how many nights I have been nervous and sleepless to hear the pitiful cries of poor animals stored in the cold, damp cellars awaiting death or torture, and never did I get one single fact for the benefit of humanity out of all the vivisection and physiological experiments on animals; for all physicians know that experiments obtained through fear, pain, and even anæsthetics, are absolutely worthless when applied to human life. Even with anæsthetics, a reaction comes which destroys all therapeutical action and perverts all physiological results, and when applied to man starts and ends with the same experimental mystery. While in New York I saw a late noted professor of physiology, with steel-pointed instruments crush down through the skull of small animals, breaking down the nerve centres, and destroying the ganglion of certain nerves, to demonstrate that the organs supplied by those nerves would be interfered with. Another pastime was to split open a large calf and stick a small flagstaff in the heart; and it fluttered amidst the echo of cheer for the calf that had contributed so much to science. It is time that the medical profession was lifted out of such base practices, and placed upon the road of humane progressive science. Correct anatomy may be learned from the dead subject. Correct physiological action can only be had from the living subject placed in conditions as near natural law of life as possible, and then each life and species must give its own reliable certificate. I believe that when our legislators gives this subject serious thought, they will restrict this cruel vivisection to men of reason and feeling, open the doors of biological laboratories to the daily witness of those who have mercy, unlock the dark cellars of pitiful, starving pain, and guide science on in the sunlight of mercy, and in the field of right."

MRS. CAROLINE EARLE WHITE IN CONTROVERSY.

The New York *Evening Post*, on the 4th of August, published a long article giving an account of the Anti-Vivisection movement in America, mentioning the different societies, the work that was being done, and making frequent allusions to Miss Cobbe's labours and to her advice to her colleagues in the United States as to the best means of conducting the propa-

ganda. A certain Dr. Ely took exception to the publication, and sent a letter to the *Evening Post*. Mrs. White wrote a reply to Dr. Ely and forwarded it to the *Evening Post*, but the editor declined to publish it on the ground that his paper did not wish to enter into any controversy upon the subject, but only to give the news of the day as to the different reformatory movements. We give here Mrs. White's answer, at the same time remarking that if the editor of the *Evening Post* was so averse to entering into any controversy or favouring either side of the subject, we cannot see why he should have published Dr. Ely's letter.

TO THE EDITOR OF THE "EVENING POST."

DEAR SIR,—My attention has just been called to the article in your journal of August 4th, "What the Anti-Vivisection Society is Accomplishing," and to a letter commenting upon the same, by Dr. Leonard W. Ely, in your issue of August 6th. I beg to be allowed the favour of a few lines in reply to Dr. Ely, who asks to have some well-authenticated cases of cruelty. He has only to get Dr. B. A. Watson's book describing his experiments upon 141 dogs which he let fall from a height on to a floor made of ridges and bars of steel or iron, so that the concussion of the spine might be as great as possible (the dogs being "hopped" as he expresses it, so that they could not avail themselves of the slight protection afforded by nature); or Dr. Phelps' account of his experiments in ankylosis of the joints, where he tortured a number of dogs by twisting one of their legs over their backs in a cramped and unnatural position, and prevented their obtaining the slightest relief by sealing them up in plaster-of-Paris, so that they could not move the suffering limbs, and keeping them in that condition for several weeks. If these do not satisfy him, he can obtain the published account of the experiments lately performed at the Harvard Medical School by prominent vivisectors, one of which was to remove the epiglottis of dogs, and then keep them alive for three weeks, the poor creatures strangling every time, when, impelled by hunger or thirst, they attempted to take any food or water. Everyone who has ever, by accident, taken a morsel of food into the windpipe, knows the agony it causes until removed, and we can fancy what it must be to have every particle of food or drop of water go into the windpipe, on account of the deprivation of the natural protection afforded by the epiglottis. I select this out of a long list of cruel experiments performed at the Harvard Medical School, because, having few technical expressions in the description, it is better suited to the lay comprehension. As these accounts are all given by the men who performed the experiments, there can be no doubt of their accuracy.

Miss Cobbe's advice to her followers, to take their stand on the impregnable ground of the immorality of vivisection, is, I think, excellent; at the same time, we may use our commonsense in judging of the correctness of the claim of great benefits arising from vivisection. Is that claim carried out by the results that we see before us? No, indeed; far from it. Of all the numerous diseases that afflict the human race, we are not aware of one that the medical profession has learned to cure by means of experiments upon animals. Consumption, cancer, leprosy; typhus, typhoid, and other fevers, still flourish and claim every year thousands of victims. It is a disputed point whether anti-toxin is of any benefit in the treatment of diphtheria, many physicians believing that it is more productive of harm than good. There is the argument, in addition, against vivisection, of the demoralization caused by it among those who practice it; the blunting of the sensibilities and the inevitable lowering of the higher nature, as compensation for which a vast amount of gain would be necessary, in a corporeal point of view, to the human race, a much greater amount than I ever knew the most ardent advocates of vivisection to claim.

Dr. Ely closes his letter by saying: "Who ever heard of a physiologist who was not a vivisectionist?" I don't know whether by vivisectionist he means an experimenter or one defending experimentation, but in either case I can tell him of a number. Lawson Tait, one of the greatest surgeons now living, is in favour of the total abolition of vivisection. Sir William Fergusson, the most celebrated surgeon, perhaps, of the past generation in England, said in his examination before the Royal Commission, that he was "not aware of any experiment on the lower animals having led to the mitigation of pain, or to improvement regarding surgical details." Sir Charles Bell, the most eminent surgeon of a previous generation, spoke even more strongly against vivisection, saying in one of his published works that it had never been of any use to him in the discoveries he had made, nor did he believe that it was productive of any benefit; and our great surgeon in this country, Dr. Henry J. Bigelow, of Boston, who died a few years ago, was an earnest opponent of all cruel vivisection, maintaining that there should be no experiments upon animals except those which inflicted no pain, thus advocating almost the same end that we do, viz.: that of total abolition, since experimenters would care little or nothing for vivisection were they confined to experiments which caused no pain. He said, in one of his published speeches, that it was

better for him and his friends to die than to prolong existence at the price of such sufferings as he knew were being inflicted in the laboratories of vivisectioners. Were not these men physiologists? The trouble with Dr. Ely and men of his ilk is that they know so little of the subject of which they are talking.—Yours truly,

CAROLINE EARLE WHITE,

Cor. Sec. Amer. Anti-Vivisection Society.

Nantucket, August 11, 1897.

NEW BOOKS, REPORTS, ETC.

THE OCTAVE OF CLAUDIUS. By Barry Pain. London and New York: Harper and Brothers, 45, Albemarle Street, W. This is a novel, and tells a very unlikely story, but it is well written, interesting, and in parts absorbing. The "villain of the piece" is one Dr. Lamb, who, in spite of his name, is made to appear a very wolf in nature. He early confesses that "I've told dozens of dishonourable lies myself. But there, my system of ethics is different and simpler, there is one great purpose, and all else is subordinate to it." This purpose can be guessed from the fact that Dr. Lamb frequently works all night in a laboratory, and that he tells Claudius Sandell—"Last night I stood before the gate—the locked gate—that stands between the living and the mystery of life. I tampered with the lock, but I could not force it. I could not get in. But Sandell, I assure you—I am speaking seriously—last night I caught a glimpse between the bars. It makes me breathless. Can you wonder that I am enthusiastic?" His work, he states a little further on, is for the good of humanity—ultimately. The way in which he seeks to forward it is this: Claudius Sandell is the son and heir of a baronet, and a Cambridge graduate. He comes to the end of his means, and, wandering away from London, falls weak and weary on Wimbledon Common in a state of semi-starvation. Here he is found by Dr. Lamb, who gives him brandy, takes him into his house, which is near, and clothes and feeds him. Of course Sandell is in a hopeless condition of mind. He has had enough of life, or thinks that it has nothing more that is valuable or tempting to offer him. Therefore, when the doctor tells him that, impelled by the enthusiasm above described, he wants a man who "will make over to him the remainder of his life for the consideration—eight thousand pounds—that I am prepared to offer, giving up himself body and soul to me," he does not recognize any impediment to prevent his making the bargain, and he makes it. Before surrendering himself, however, Claudius is to have eight days of freedom and enjoyment with the £8,000 at his disposal. This is the "Octave." The rest of the book is devoted to showing that much may happen in eight days, and to a young man with well-placed friends and large means at his disposal, naturally much does happen. But the story after this is ordinary in type, and has little interest for us, except that Dr. Lamb, who was ready to take another's life, loses his own, and that in a very sensational way. The motive of the book, so far as the introduction of a character like Dr. Lamb is concerned, is to show that a man possessed with the "enthusiasm of research" will stop at nothing to achieve his purpose. Shylock's bargain for a pound of flesh has made his name universally contemptible; how much more then should a man who bargains for the purchase of body and soul be the object of the same feeling? is, probably, the sentiment Mr. Pain sought to arouse. If so, he has succeeded.

SEVEN SAYINGS OF CHRIST.—This is a charming series of little booklets written by Miss Edith Carrington for "The League of Merciful Children." Interesting in their matter, high in tone, and simple in language, they are admirably adapted for teaching children to be merciful to all living creatures. As the title indicates, they have a religious basis, each booklet being written around a text concerning an ass, a hen, sheep, sparrows, doves, etc., and in all are adorned with a suitable illustration. They are published for the League by Miss Woodward, at 158, Lancaster Road, Notting Hill, W.

THE NEEDLESS CRUELITIES OF VIVISECTION.—Extract from

the annual address before the Massachusetts Medical Society, by Dr. Henry J. Bigelow, Professor of Surgery in Harvard University:—"How few facts of immediate considerable value to our race have of late years been extorted from the dreadful sufferings of dumb animals—the cold-blooded cruelties now more and more practised under the authority of science! The horrors of vivisection have supplanted the solemnity, the thrilling fascination of the old unetherized operation upon the human sufferer. I have heard it said that 'somebody must do this.' I say it is needless. Nobody should do it. Watch the students at a vivisection. It is the blood and suffering, not the science, that rivets their breathless attention. If hospital service makes young students less tender of suffering, vivisection deadens their humanity and begets indifference to it."

THE NATIVE UNREST IN SOUTH AFRICA.—Rumours have been current for a few days past that the Fingoes in the Transkoi are restless, and they have been in a measure confirmed. The unrest is due to the death of cattle after inoculation, the Fingoes believing that the beasts have been deliberately poisoned.—*Daily Graphic*, August 27th.

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Telegraphic Address: "Zoophilist, London."

THE ZOOPHILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 7.]

LONDON, NOVEMBER 1, 1897.

[POST FREE, 3½d.

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NOTES AND NOTICES.

ARRANGEMENTS are being made for holding a public meeting at Oxford on Thursday, the 11th instant.

WE learn on authority that Professor Lloyd Morgan has long since seen cause to regret the performance of his experiments on scorpions, and that he has never repeated such experiments.

IN the *Vegetarian Review* for October, Mr. Henry S. Salt, Hon. Secretary of the Humanitarian League, has published a spirited and well-reasoned answer to the chapter on "Theology and Vivisection" in Mgr. Vaughan's recent book, already referred to in the *Zoophilist*. In concluding his article Mr. Salt remarks:

"One cannot but smile at Mgr. Vaughan's grandiloquent remark that 'We Catholics may well rejoice that we are safeguarded from all narrowness and protected from both extremes by the clear theology of the Church, which determines the position we are to hold with the greatest neatness and precision.' The results of this 'precision,' in regard to vivisection, as shown in the absolutely conflicting positions attained by Cardinal Manning and the more democratic Catholics on the one hand, and by the Vaughan-cum-Rickaby school of reactionists on the other, are decidedly entertaining to an outsider."

DR. CAMPBELL BLACK, of Glasgow, a letter from whom condemning 95 per cent. of the vivisection at present practised was printed in our June issue, and who was subsequently deprived of the Professorship of Physiology in Glasgow University, is announced to lecture in London on the 23rd inst. The lecture, which will be given in St. Martin's Town Hall, is arranged conjointly by the Leigh Browne Trust and the Humanitarian League.

IN a letter to the Editor of the *British Medical Journal*, which we reprint on another page, Dr. Lennox Browne points out the absurdity of certain experiments—for such they may be accurately called—with Behring's anti-diphtheritic serum on patients suffering from tuberculosis, sciatica, sarcoma, lupus, and Hodgkin's disease. The subject, as he also points out, has its serious side, as the administration of anti-diphtheritic serum to non-diphtheritic patients is calculated to do them serious harm. Another aspect of the matter is damaging to bacteriological theories. Hitherto it has been taught that the anti-toxic serums to be of any value must be specific to the disease for which they are given; but in using the anti-diphtheritic serum for other diseases, the bacteriologists are destroying, as Dr. Lennox Browne does not omit to tell them, their own position.

THE vivisection question has been rather prominent in novels lately. This shows that increasing interest in the subject is awakening. Mr. Wells, in his "Invisible Man," makes his hero discover the secret of attaining invisibility by experimenting on animals. From a scientist with a passion for chemical and physiological research he rapidly develops into a thief and brutal murderer. Mr. Wells is, we believe, a distinguished scientist himself, and the manner in which he depicts his hero absorbed in his discoveries regardless of the rights of his fellow-men and sacrificing everything to his own greed is very suggestive of the true scientific spirit.

PROFESSOR SANARELLI having experimented on some horses and other animals with a serum he thinks "very probably" would cure yellow fever in human beings, is anxious to try the experiment. It is admitted, however, that the matter awaits "further development." What hospital, we wonder, will furnish the developers?

THESE "developers" have now been furnished. The *Boston Evening Transcript*, of September 25th, contained a long report of Professor Sanarelli's unprecedented experiments on human beings. He has not hesitated to inoculate healthy persons with the most fatal of infective diseases in order to prove the verity of his microbes. This he was able to do at the quarantine station on the Island of Flores, near Montivideo, because in that place lives are extremely cheap, where the lowest orders of the people are concerned. Sanarelli himself says, "My experiments on man reached the number of five." He notes the terrible symptoms and "the final collapse"—in plain English, the scientific murder of his victims.

WE note with regret that the amount of diphtheria in London rose again at the beginning of October. The

British Medical Journal for the 9th inst. made the following announcement:—

"The mortality from diphtheria in London still continues to increase. The deaths referred to this disease, which had been 25, 35, and 45, in the preceding weeks, further rose to 49 during the week ending Saturday last, October 2nd, and exceeded the number registered in any week since March last, although they were slightly below the average in the corresponding weeks of the ten preceding years. The following week the mortality advanced to 53 cases."

MEANTIME the work of manufacturing and vending the anti-diphtheritic serum goes merrily on; and no wonder, as it seems that if the stuff fails to lower the death-rate from diphtheria, it has the effect of filling the pockets of those who produce it. We have before us the extract from a private letter stating that a party lately visited the stables at Sudbury where antitoxic serum is produced from horses. They were shown round by the doctor in charge, who stated that money was made by the sale of the serum, "one horse which was bought for £5 having brought in £500." This is making money with a vengeance, and the fact that such a state of things exists explains fully why the serum-dealers hold on to their product with such tenacity. Could it be this matter that Professor Michael Foster had in his mind when in his address at Toronto he alluded to "the man who lights on a new scientific method holding the key of a chamber in which much gold may be stored up"? If so, we do not wonder that he considered a warning to be necessary.

THERE are other serums besides that for diphtheria, and possibly, of course, other "gold mines." For instance there is the blood serum inoculation for typhoid, with which, we learnt from the *British Medical Journal* of October 9th, Surgeon-Major Semple, Assistant Professor of Pathology at the Army Medical School at Netley, had proceeded to Maidstone with the view of placing it at the disposal of the inhabitants. The method, we were also told, had been worked out in the Pathological Laboratory at Netley by Professor Wright and Surgeon-Major Semple.

It was not proposed to inoculate persons already suffering from the malady, no curative power being claimed for the new nostrum. But "it was thought that it might be advisable to vaccinate those who had not suffered, but who might at any time unwittingly be exposed to the infection." "The demand, however," it was added, "must come from the general public," so that if the experiment—for experiment it undoubtedly was to be—failed, the responsibility would lie on the public and not on the inventors and perpetrators of the uncleanly process. That such an experiment should be perpetrated in cold blood, with the assent of the authorities, is absolutely shocking. Typhoid is the result of water pollution; to avert the effect of this another and different process of pollution is set up. Surely this is against the order of nature and cannot stand.

NEVERTHELESS, the scientific experimenters have been allowed to have their way to some extent. The unfortunate officials of Barming Asylum, having apparently to bow to authority, were, about the middle of the past month, duly inoculated with the new nostrum. The following statement appeared in the *London Standard* of the 13th ult.:—

"On inquiry at Barming Asylum yesterday afternoon, it was

ascertained that eighty of the attendants, of both sexes, had been vaccinated against typhoid. One of the attendants who had been operated upon by Dr. Semple, of Netley, related his experience, saying that the effect was a chilly feeling, resembling that produced by a violent cold; sickness and headache also followed the operation. The subject in this case was incapacitated for some hours, but in other instances it took about two days to shake off the effects. Dr. Semple's representative has inoculated some of the nurses in the employ of the Town Council, but very few of the inhabitants have undergone the operation."

We hope the asylum attendants liked the process! If they sacrificed their feelings for the sake of science we fear their reward is more than problematical.

It may be that for us to dwell so much on this sort of topic may at times appear to our readers a little monotonous, but it should be borne in mind that these bacteriological fads are what just now form the chief hobby of the experimenting scientists. How helpless and hopeless it all is may be gathered from news from Poona as to a renewed outbreak of plague, under date of September 24th. The *Standard* correspondent wrote:—

"There can, unfortunately, no longer be any doubt concerning the recrudescence of the Bubonic Plague in the Bombay Presidency. Not only has the number of deaths in the town of Bombay been steadily increasing for some time past, but there has been a marked increase in the Poona district, where the epidemic has made its appearance in a far more virulent form than was the case previously. At the present moment two native cavalry regiments, the 2nd Bombay Lancers and the Poona Horse, are out in plague camp on account of numerous cases having occurred in the regimental lines. In the town of Poona there are at present upwards of a hundred cases of plague, with a tendency to increase. In some of the outlying parts, Sirur, for instance, there have been very large numbers of deaths from the same cause. But where the present outbreak differs from the former is that now Europeans, who formerly enjoyed a marked immunity from the epidemic, are being attacked."

So that the inoculation for plague, which failed to save life last year, has also failed to prevent a recurrence of the scourge. Hence it follows that the bacteriologists are again discredited.

MR. ISRAEL ABRAHAMS, in his "Jewish Life in the Middle Ages," says (p. 128), concerning the history of the Jewish religion:—

"The point that concerns us here is the success with which the influence of religion was lovingly turned to domestic uses. . . . The lower animals were treated with uniform kindness. . . . Pious Jews asked Christians to milk their cows on the Sabbath and retain the milk, for though the Jews would not derive profit from the work done on Saturday, they would not let the animals suffer pain. On the other hand, hens were sometimes kept in the house, so that the Jew might fulfil the injunction of the law which bade him to feed his animals before he fed himself. Bread crumbs might be thrown to the birds on the Sabbath."

DR. KREIDMAN, of Altona, writing on German Science and the German Physician in the *Aerztlichen Rundschau* (Vol. vii., No. 24, 1897), says that the study of bacteriology invading the science of medicine has destroyed the serious investigation of disease:—

"German science must be confined to the institutions for infectious diseases; there the Kochians and Behringians may brood and occupy the time with the question of experimental immunity of guinea-pigs, rats, mice, etc., as long as they choose, but they must not tread upon the practical field concerning man. Man must be left to the man-doctors,

who are able to learn at the bedside of man only, and never from guinea-pigs and rats, or cultures of streptococci, cholera, typhoid, etc."

HERE are some injection experiments of the character described in the Inspector's report as "painless." Monochlorhydrin was injected into a rabbit's stomach on October 23rd. The following were some of the effects of the drug :—

"Hops unsteadily; generally falls on side, when it has some difficulty in righting itself. . . . October 25. Condition worse; cannot stand on legs . . . the head fell to one side and the eyelids closed. . . . The animal gradually grew worse during the next four days; the heart beats got weaker. . . . Completely paralysed. . . . Death occurred on the night of the 31st."

There are many pages of similar details in a paper entitled "Action of Chlor-Hydrins" in the *Journal of Physiology*, vol. xxii., p. 42. The experiments were carried out at the Pharmacological Laboratory, Cambridge.

PROFESSOR DR. LIEBRICH recently delivered an address on "The Aims of Modern Medicinal Treatment" at the Congress of Clinical Medicine at Berlin. Dr. Liebrich, it will be remembered, was the first to introduce chloral hydrate into medical practice. As he is a "researcher" of great eminence, anything he may have to say on our side is naturally invested with the greatest importance. And he has much to say for us.

WITH respect to bacteriology and the germ theory of disease, he admits that the discovery of the supposed cause of the malady has not led to the desired goal as expected.

"The therapeutic results have failed." "The vital power of the human cell is almost in no way comparable with that of the animal. Hence arises the difficulty of advancing . . . by experimental means." "The postulates which have been elucidated by experiments on animals do not really ratify themselves with that simplicity which has on theoretical grounds been attributed to them by authors."

WITH regard to phthisis he speaks in the following terms :—

"Villemin has demonstrated the transmissibility of tuberculosis from man to animals, but not that of pulmonary consumption, for it is seen that the tubercle bacillus when taken from the non-phthisical, always produces the same tuberculosis in guinea-pigs, whereas the inoculation of human beings with the tubercle bacillus cannot lead to the production either of pulmonary phthisis or of general tuberculosis." "A phthisis remedy is tested by bacteriologists by infecting the animal with tubercle bacilli. These have invariably given rise to a general tuberculosis, not because the cells are already diseased, but by reason of the totally different vital power from that of man which they possess."

OF serum therapeutics the Professor says :—

"The idea that they have met with unequivocal acceptance is by no means universally true. The opponents of the treatment do not only adduce the fact that the original extensive promises have not been fulfilled, but doubt also whether an actual cure is effected by the serum."

He denies that there is the slightest analogy between serum treatment and vaccination.

"Persistently unfavourable results have hitherto never been replaced by successful ones. They naturally contribute powerfully to the armamentarium of the opponents of antitoxin."

WITH reference to the serum treatment of tetanus he says :—

"It will already be obvious, *a priori*, that from the unique

constitution of the animals used in this research no safe conclusions can be applied to human beings."

In conclusion he quotes the words of Professor Edmund Rose :—

"The case is the same with anti-tetanic as with all other remedies. The statistics in the literature give no reliable picture, because at first only the cures obtained with the new remedy are in all joy set down. The collected reports with greater experience turn out worse."

A DOCTOR, signing himself "E. O. N. K.," vehemently protests in the *Journal of the American Medical Association* against the Editor's allusion to anti-vivisectionists as "degenerates and perverses." He says :—

"There is a larger number of the medical profession in favour of the Anti-vivisection Bill than its opponents suppose, and they won't be 'muzzled' by being called revolting titles. It is no more a convincing argument to liken humanitarians to weak-minded members of the criminal classes than it would be a just retort for them to claim that the most actively engaged against the Senate Bill No. 1063—[the Anti-vivisection Bill]—were men who simply desired to slaughter their thousands of dumb animals as a means of professional advertisement."

AT the Medical Congress recently held in Moscow, Dr. Oppenheim, of Berlin, read a paper on "The Failures in Brain Surgery because of Faulty Diagnosis," in which he says that "brain localization is often most doubtful, the diagnosis of brain abscess from brain tumour is often almost if not quite impossible." He declares that the symptoms are frequently so deceitful that it is not possible even to discover on which side of the brain the tumour should be looked for. Dr. Bergmann, of Berlin, also read a paper on "Brain Surgery." He said that the localization of functions was not enough to guard the surgeon against error; he had himself opened the skull for tumour and found none.

MR. JAMES LONG's article in the *Nineteenth Century* for October, on "Consumption in Cattle," foreshadows the universal application of the tuberculin test at the cost of the nation. Koch's tuberculin injected into a suspected animal is supposed to cause a well-marked reaction if tubercle is present. The effects of these inoculations are so remarkable that we have the gravest reasons for doubting the bacteriological position respecting them. In one case some twenty-eight out of thirty head were slaughtered: after the injections the bodies exhibited on *post-mortem* the presence of tubercle. But may not the disease have been communicated by the tuberculin? as Mr. Long indeed suggests—"The injection is made, a rise of temperature follows, the animal is slaughtered, and, behold, the bacillus is found." We confess it seems highly probable.

AN increased number of women have entered as students of medicine this year. It is painful to learn that women are experimenting in bacteriology. In the *Reports of Johns Hopkins Hospital*, vol. vi., we read (p. 314), in a paper on "Experimental Diphtheria Intoxication," by Dr. Flexner, "the observations on the serum inoculations have been studied by me in conjunction with Dr. Ethel Blackwell." The animals experimented on were rabbits, guinea-pigs, and mice. In the same volume Dr. Berkeley has a paper on experimental poisoning of rabbits with large and continued doses of alcohol.

IN the address delivered at the opening of the Laboratory of Clinical Medicine, Philadelphia, by Dr. W. H. Welch, Professor of Pathology at Johns Hopkins University, the lecturer said:—

"Anatomical, physiological, pathological, pharmacological, and hygienic laboratories must concern themselves with many problems which have apparently no immediate and direct bearing upon practical medicine. In the long run their contributions are likely to prove most beneficial to medicine if broad biological points of view, rather than immediate practical utility, are their guiding stars."

It is always the most eminent medical scientists who make these admissions; it is the rank and file who make the outrageous claims for the experimenters, in other words, "the fools rush in where the"—well, we can't say "angels"—where the "researchers" themselves "fear to tread."

Obituary.

PROFESSOR F. W. NEWMAN.

Professor Francis William Newman, younger brother of the late Cardinal Newman, for many years a subscribing member of the Society, died in the night of Monday, October 4th, at his residence, Norwood House, Westonsuper-Mare, at the advanced age of ninety-two. The deceased had not done any literary work for the last two years; though not blind, he could not see to read or write. In May last he had a fall down some stairs and hurt his leg, since which accident he was confined to his bed. He passed away peacefully in his sleep, his medical adviser, Dr. Wilde, having visited him as usual a few hours earlier.

Francis Newman was born in 1805, four years after his more distinguished brother. He was educated at Worcester College, Oxford, and elected to a scholarship at Balliol, but resigned in 1830, being unable conscientiously to comply with the regulations of the Test Act then in force. After prolonged travel in the East—where he laid the foundations of his wide knowledge of Oriental philosophy—he returned to England. In 1846 he was appointed Professor of Latin in London University, a post which he held for seventeen years. Among his best-known writings may be mentioned "The Soul: Its Sorrows and Aspirations," and "Phases of Faith." Professor Newman took an active interest in many social movements, and wrote and spoke on vivisection, temperance, and other subjects.

MR. EDWARD MAITLAND.

The death is announced of Mr. Edward Maitland, in its early days a member of the Committee of the Victoria Street Society. He was the son of a Brighton clergyman, and was himself intended for holy orders, being educated at Cambridge, but his views changed. He spent some time in Mexico, California during the gold fever, and in the islands of the Pacific, and on his return devoted himself to literature. He was a man of fine feeling and much intellectual power, but he lacked balance and adopted some peculiar views. He gradually relinquished the society of his former friends, became a vegetarian, and finally founded, says the *Athenaeum*, along with Mrs. Anna Kingsford, whose life he afterwards wrote, a new and strange religion. He expired at Tonbridge, on Saturday, October 2nd, and was buried there.

CORRECTION.—For "14 or 15 per cent. per annum," in the last line but one of the leading article in last month's issue, page 108, read "14 or 15 per 1,000," etc.

OUR CAUSE IN THE PRESS.

THE VIVISECTOR'S CATECHISM.

The controversy which, under the above not altogether appropriate title, was commenced in the *Sunday Times* some months back was continued into October. On the 2nd of that month the journal named published a letter from Dr. Berdoo in which he wrote as follows:—Now to the substance of Mr. Burton's arguments. First. He says Sir Charles Bell was a vivisector. Who denies it? Not I. The great scientist protested in the clearest and strongest terms that "experiments had never been the means of discovery," and that "the opening of living animals had been done more to perpetuate error than to confirm the just views taken from the study of anatomy and natural motions. In a foreign review of my former papers the results have been considered as a further proof in favour of experiments. They are, on the contrary, deductions from anatomy, and I have had recourse to experiments, not to form my own opinions, but to impress them upon others. It must be my apology that my utmost efforts of persuasion were lost while I urged my statements on the grounds of anatomy alone." ("Nervous System," Longmans and Co., 1839, p. 217.) Nothing can be clearer than this, and no amount of wriggling will enable Mr. Burton to make the words mean other than they do mean. I very much prefer to believe Sir Charles Bell than his controversial commentators. Second: Mr. Burton makes the amazing statement that "there was no treatment of myxoedema and cretinic idiocy until Professor Horsley had proved by vivisection experiments that these diseased conditions were due to the loss of the thyroid body." Mr. Horsley's researches on the thyroid gland were published in 1885. But Dr. Coindet of Geneva long before this had treated the disease with iodine successfully, and Surgeon-Major Holmes reported in the *Lancet*, October 10th, 1863, its successful treatment with red iodide of mercury. In 1877 Dr. Ord discussed the relations of myxoedema to atrophy of the thyroid gland. There was no necessity for experiments on animals at all. It had been discovered in the hospital at Berne that in eighteen cases of complete removal of enlarged thyroid gland a condition which we now know as myxoedema followed. . . . It had been already discovered by Dr. von Eiselsberg that a transplanted thyroid gland was capable of continuing its functions, and had chemists done then what they have since done in their laboratories, viz. sought and discovered the active principle of the thyroid gland, which is a peculiar form of iodine called thyroïdin, there would have been no necessity for the many cruel and prolonged experiments on animals which have been performed. Now it is a remarkable thing that so long ago as 1863 iodine was the best treatment for thyroid disease and cretinism, and thyroïdin or the iodine naturally produced by the healthy gland is the treatment of to-day. I do not dispute the value of the new treatment, but I do believe we should have arrived at it all the same by clinical observation even if no experiment on animals had been performed in connection with it. I may add that Dr. Berkeley of the Johns Hopkins University, says in the *Bulletin of the Hospital* (July, 1897) that "The favourable side of the administration of the thyroid extracts is shown in the very numerous articles in current medical literature . . . and it is quite safe to say, after a review of some of them, that the results would have been as brilliant had no medicament been administered." So much for Mr. Burton's arguments; the expletive phrases employed to plump his letters I purposely ignore. We can be courteous even if we are dull.

VIVISECTION IN AMERICA AND IN GREAT BRITAIN.

The following letter appeared in the *Clapham Observer* of October 2nd:

"SIR,—In your issue of August 14th there appeared (in connection with some remarks of mine) a description of the many institutions you have for the care and relief of animals.

"It is always delightful to me, and to all the members of the

Society which I represent, to hear of the different places where the wants of dumb beasts are attended to; and we feel that we should express our admiration of those who give their time and money in this worthy cause.

"Yet, notwithstanding this violent self-congratulation on the part of the *Clapham Observer* (founded on the assertion that 'the New Yorkers beat creation,' and the above-mentioned institutions go far ahead of ours), there is a matter, closely allied to the humane care of animals, in which I, for one, fancy you are not so far ahead of us as you suppose.

"I refer to Vivisection, or rather Anti-vivisection.

"You have a Vivisection Act, which we have not: but after all, what good does it do you? Or, to ask a more pertinent question, what cruelty does it prevent?

"Our vivisectioners carry on their trade without any direct concealment from our Government. Can you say as much for yours?

"Not long since, at the opening of Guy's Hospital, the Prince of Wales was loudly cheered, because he expressed himself as satisfied that the experiments there conducted were under the strict supervision of highly qualified investigators, and that operations when not performed under complete anæsthesia, were of a trivial nature.

"In the printed reports these investigators have given to the medical world, they claim to have made the most severe experiments, without anæsthetics, at the place mentioned. Shall we believe they never made these experiments, and wish to pose as having done what they did not do? Shall we believe the Prince of Wales knew what they had done? Shall we believe he was deluded by their official returns, which were totally different from their accounts in the medical journals?

"Whatever we believe in these cases, we must surely credit the statement that the Vivisection Act is one of those Acts of Parliament through which a coach-and-four can be driven; and while we congratulate you on your humane institutions, we must decline to do so on your Vivisection Act.

"Better have no Act at all, with the chance that a good one may be enacted, than to have one so framed that behind it the vivisectioners are protected—and not their victims.

"ANNA SARGENT TURNER,

"Secretary New York Anti-vivisection Society,

"Saugerties, New York.

"Sept. 8th, 1897."

INOCULATION IN INDIA.

(FROM THE "PALL MALL GAZETTE," OCTOBER 14th.)

SIR,—In a leading article devoted to Indian affairs the *Pall Mall Gazette* recently said: "The introduction of the Pasteur system of inoculation for cholera touched Brahmin susceptibilities, and since that nostrum has barely emerged from the condition of a sanitary fad, the authorities ought to have thought many times before consenting to its establishment." This is very much on the line anti-vivisectionists have adopted from the first. But they go further. The plague regulations are not the only cause. In part at least the unrest is due to the fact that for some years India has been a dumping ground for bacteriologists.

Four or five years ago Mr. W. Theobald, an Anglo-Indian ex-official of over thirty years' residence, uttered a significant warning on the reported disaffection in India. He claimed that the Pasteur exploitation out there was calculated to offend and alarm the religious sentiments of the native population, and in a pointed manner emphasized the moral of the Indian Government's exploitation in bacteriology. The folly of it all is as plain as noonday; and worse is being done, for there is more experimentation going on now than ever.

Mr. Mark Thornhill, who is one of the few civil ex-officers now remaining who went through the Indian Mutiny, and has a knowledge of the Hindoo's feelings such as in ordinary times it is hardly possible for a European official to obtain, in a letter to me a few months ago, said that for the sake of argument he would credit the Pasteur system with all the benefits claimed for it by its strongest advocates. "But," he added, "surely they are but dust in the balance compared with the ruin, the slaughter, the countless horrors, even the possible danger of our Empire, such an outbreak would occasion." The Government has risked the possibility of

such calamities as are here spoken of only to carry out what after all is a mere scientific experiment.—I am, your faithfully,
53, Chancery Lane, W.C. JOSEPH COLLINSON.

THE VIVISECTIONERS' CATECHISM.

(FROM THE "SUNDAY TIMES," OCTOBER 24TH.)

MADAM,—“To daze” is another form of to dazzle, and we all know what that means. Spencer says (F. Q. I. iv. 9), “While flashing beames do daze his feeble eyen.” That well-known work, to be found on every editor's desk, “Roget's Thesaurus,” classifies the verb “to daze” with words relating to light, thus: “daze, dazzle, bedazzle, radiate, shoot out beams, etc.” To say that a person is “dazed by fog” is, I maintain, very inelegant and slovenly English. If it gratifies Mr. Burton to use the phrase, it pleases him and doesn't hurt me; though, as an old reviewer, I should always note such an expression for disapproval. Your correspondent's last letter is a fair specimen of the utter unscrupulousness of the vivisectionist mind. Here is Sir Charles Bell, the greatest genius which medical science has produced since the days of Harvey, who tells us in the most solemn manner in his most celebrated book, not only that his great discoveries had nothing to do with vivisection, but that vivisection “has done more to perpetuate error than to confirm just views,” and Mr. William E. Burton brands the most eminent surgeon of modern times as a liar because it does not suit his view of controversy to have the great physiologist opposed to him. No doubt it is a brave thing to attack a lion unless the creature be dead, and then it is safe enough, but Mr. Burton, with all his hectoring, will not be able to sully the fair fame of the discoverer of the true physiology of the nervous system. The facts about Sir Charles Bell are against your correspondent, “so much the worse for the facts!” he cries. I said once I was “amazed” at a statement of Mr. Burton's. I shall never be surprised again at anything he may say. The value of Mr. Burton's remark on the history of the treatment of myxœdema is most amusingly exhibited by his falling into a little trap—a misprint in my letter on the subject—in which I am made to say that in “1887” Dr. Ord discussed the relations of myxœdema to atrophy of the thyroid gland. “Quite so!” exclaims your correspondent in his ignorance of the fact that Ord's researches were published in 1877! It was, therefore, not two years after the publication of Mr. Horsley's researches, but eight years before that event that Dr. Ord gave his discovery to the world. Here, at least, is a “faux pas” which should teach your correspondent that his “de haut en bas style” of treating his opponent is rather apt to lead him astray at times.—I am, Madam, yours, etc., EDWARD BERDOE.

MURDER AND VIVISECTION.—In that original little American periodical of pre-eminently progressive thought, the *Universal Republic*, Mrs. Mallory, its editor, writes movingly upon the subject of the “Vivisection Horror.” Mrs. Mallory derives her inspiration from the following extract from *Frank Leslie's Weekly*, which furnishes her text:—“There has been within the last few years a number of murder cases in this country in which the murderers were physicians or medical students. . . . So numerous have these cases been that many persons are led to inquire whether a medical man, regarding life more lightly than others, is more likely to take it than another person.” That these serious charges are not devoid of foundation is clearly proved by such irrefutable facts as the atrocious murder of two girls in the Emmanuel Church at San Francisco by Durrant, a medical student; by the murder of Helen Potts by Carlisle Harris, also a medical student; the fatal poisoning, by Dr. Meyer, of some half-dozen men and women in various cities, and the innumerable murders committed by Dr. Holmes of men, women and children. Very logically, though perhaps somewhat over-rabidly in the matter of expression, does Mrs. Mallory point out that:—“Physicians and medical students who practice the Vivisection horror are more likely to commit murder than those who do not practise this diabolical cruelty, for the reason that the cultivation of the murderous instincts, by brutally cutting up and torturing helpless animals, causes them to grow, and torturing and murdering human beings are the natural and legitimate fruits.”

PUBLIC MEETING AT READING.

On Monday evening, October 25th, a well-attended public meeting, promoted by the Reading and District Branch of the National Anti-Vivisection Society, was held in the Y.M.C.A. Hall, Reading. The Rev. J. Stratton (Wokingham) occupied the chair, addresses being given by Bishop Barry and Mr. B. Bryan (Secretary of the National Anti-Vivisection Society). Supporting the Chairman were the Rev. S. H. Soole (Vicar of Greyfriar's Church, Reading), the Rev. A. H. Cunningham (Hon. Sec. of the Reading and District Branch), Dr. D. Key, and Mr. R. Carter. Amongst the audience were Miss Skerrit (Wokingham), Mr. W. H. Greenhough, Chief Librarian (Reading Free Library), Mrs. Stratton, Mr. and Mrs. R. Jackman, Mr. E. Moore, Mr. D. Tull, and Mr. G. Ashdown. The meeting commenced with prayer.

The CHAIRMAN sketched the growth of the Humanitarian feeling in this country from the passing of Martin's Act in 1822, and related the leading facts as to the origin of the Anti-Vivisection Movement.

The Right Revd. BISHOP BARRY, Canon of Windsor, moved the adoption of the following resolution:—"That inasmuch as vivisection, involving cruel usage to the lower animals, is opposed to the highest morality and the best interests of mankind, this meeting is strongly of opinion that it should be prohibited by law." After dwelling upon the fact that the present measure, originally intended for the protection of animals from vivisection, had now become practically useless, he said one of the objects of the Anti-vivisection Society was to prevent if possible the Home Secretary from granting any more certificates to those wishing to be vivisectors. The Bishop also emphasized the fact that the kindness of the strong to the weak elevated them and formed their humanity while cruelty to those weaker than themselves brought moral harm with it. They must educate public opinion on this important matter, and then and not till then, they would have done something in the way of amending the law. How were they to do that? There were two branches of the subject—the scientific branch and the moral branch. As to the scientific branch he did not desire to enter in details; but, trying as well as he could to understand them, he must confess he was very sceptical, both *à priori* and *à posteriori* about the advantages of vivisection. He doubted *à priori* if there were many points about which animal structure and animal pathology resembled human structure and human pathology, and very often experiments made upon animals were not guides but were misleading when they came to deal with the human subject. The only really satisfactory subjects for vivisection would be human beings, and there was a time, in the *Renaissance*, about three hundred years ago, when criminals were given up to the vivisectors on the ground that they had lost their rights in society, and must be devoted for the good of the society which they had outraged. That would not be tolerated for a moment in these days, but there was no doubt that the *Renaissance* people, from the scientific point of view, were quite right. There was another reason why he felt somewhat sceptical about the advantages of vivisection. The late Sir Benjamin Richardson had said that the influence of pain had such a disturbing influence upon the animal functions that any conclusions drawn from the pathology of a tortured animal would be utterly misleading if applied to a human being in full health. He had a third *à priori* reason; looking at the Maker of this Universe as a God of righteousness and mercy he could not believe that He had ordained that their knowledge should be produced by means of cruel torture. (Applause.) Upon that matter he might lay stress, but it would have no influence upon the advocates of vivisection. Then he doubted *à posteriori* whether the conclusions deduced from vivisection would stand accurate inspection. A great deal had been said of what had been done at the Pasteur Institute with regard to the cure of hydrophobia, yet they heard that the cases of hydrophobia in France had in no way decreased, but had rather increased. He (the speaker) did not despise the scientific aspect of this matter, but the thing he would lay stress upon was the moral aspect. Vivisection was against the highest morality which dealt with the spirit of love and self-sacrifice, and believing that he would not do evil that good might come. (Applause.) In conclusion he said they must have patience and faith in

this matter. In the long run the great heart of humanity beat true and the cause would eventually triumph. The matter was in higher hands than their own. (Applause.)

The CHAIRMAN then invited any who so desired to put a question, and read a letter from Professor Lloyd Morgan, Principal of University College, Bristol, in which was enclosed the following paragraph for publication in regard to certain experiments on scorpions:—"We learn that Professor Lloyd Morgan has long since seen cause to regret the performance of these experiments and that he has never repeated such experiments." Professor Morgan stated that he had no hesitation in giving the chairman permission to make use of the statement.

Mr. B. BRYAN, Secretary to the National Anti-vivisection Society, seconded the resolution, and referring to the epidemic of fever at Maidstone, said no results of the new science of bacteriology had been applied there, and it was clear that experiments on animals and the study of germs had not advanced the treatment of patients.

The Rev. A. H. CUNNINGHAM then invited any present inclined to join the Society to do so.

The meeting terminated with a vote of thanks to the Chairman, proposed by Mr. R. CARTER, seconded by Mr. BRYAN, and carried by acclamation.

DR. CHARLES SMART ROY, the vivisector, Professor of Pathology at Cambridge since 1884, suddenly expired in a fit of epilepsy, on the 4th of October. It appears that he had not been able to work for two years previously. Dr. Roy will long be painfully remembered by anti-vivisectionists for the severity and cruelty of the vivisections he perpetrated when a young man. Working partly at Cambridge and partly at Leipsic, he opened the back, skull, chest, and abdomen of rabbits, cats, and dogs, while those animals were under the influence of curare. Another set of experiments was on the circulation in the kidneys, for which Dr. Roy invented a metal box, called an oncograph, in which the kidney of the living animal, dissected from most of its surroundings, was enclosed, in order that its pulsations might be registered. As Miss Cobbe asked, in concluding a letter to the *Spectator* some years ago, "may not each poor dog in his torture trough be heard to cry—

'If this be right,—if my devotion, love,
No mercy claim, only this dreadful end,—
If thou art justified by Him above
In mocking thus the faith of thy poor friend;

Then, Man! when thou,—trusting in Righteousness,
Paskest to judgment,—all earth's science vain,
'The God thou hast relied on, pledged to bless,
May justly doom thee to eternal pain.'

KILLED BY HIS PET.—At St. Bartholomew's Hospital, Mr. Samuel F. Langham, the City coroner, held an inquest on the 25th October, respecting the death of Mr. Philip Hirschberg, aged thirty-six years, shipping accountant to the National Bank, lately residing at 7, St. James's Road, Surbiton, who died from alleged hydrophobia.—Mr. Samuel Winnelbacker stated that with other friends he was dining with the deceased on Sunday, August 29th, at 7, St. James's Road, when Mr. Hirschberg's pet dog climbed first on to its owner's chair, and then on to his shoulder. The deceased told it to get down, but it began licking his face, and as he moved to push it down it bit him through the ear, causing blood to flow.—Dr. Henry William Lance, house-surgeon at St. Bartholomew's Hospital, stated that the deceased was admitted to the hospital on the 16th inst., suffering from fits which were consistent with hydrophobia, and death ensued twenty-four hours later. He was satisfied that death was due to hydrophobia.—Mr. Albert Owen Hughes, veterinary surgeon, of Surbiton, stated that he received the dog after the accident, but found no indications of hydrophobia. On September 2nd he poisoned the dog at Mr. Hirschberg's request, and a *post-mortem* examination being made failed to show any indications of rabies. He felt quite positive the dog was sound at the time of the accident.—Professor John Rose Bradford, of the Brown Institute, said that he had failed to trace rabies in the dog. The jury returned a verdict of death from hydrophobia.

AN ARGUMENT AGAINST THE MUTILATION AND DESTRUCTION OF DUMB ANIMALS.

By MRS. HOWE TOTTEN, IN THE "JOURNAL OF ZOOPHILY."

There are comparatively few persons who know that the above title, bizarre and impossible as it sounds, represents an actual fact.

While humane societies multiply, and the thoughtful see that what is most needed to stem the tide of criminality is to educate the young in the habits of mercy, there has actually been introduced into the regular course of study in our colleges and some of our preparatory schools a training in the art of cruelty.

What a harmless look has that item of "biology" in the catalogues of our universities, with the description of the thoroughly equipped laboratory for the study of this science! Well, this laboratory is the place where the student, whether boy or girl, is systematically taught to forget those instincts of humanity which have been slowly building up in the race since it emerged from savagery. Here is where he is taught that no torture to sentient creatures is too great if it will help him to remember a fact. Here is where he is taught to dissect animals alive with profit and pleasure, for this is that "laboratory practice" to which the student must give a certain number of hours weekly.

To test this subject an eminent physician, Dr. Ballou of Providence, has written to the presidents of a number of representative American colleges asking whether their institutions had "placed any limitations to painful experimentation upon living animals." The answer was in nearly every case that they had made no limitations.

Look, then, at the medical schools. Is there any one who doubts that the physician to whom we confide such powers of life and death should be, first of all, humane? Once the medical profession was considered the one especially dedicated to the humanities; but, wherever the new craze for experiment penetrates, it is becoming such no longer. For "science" sees to it that the student, all through the course of study that is to prepare him for dealing with the sick and helpless, shall have the sentiment of pity carefully trained out of him.

What is this training? Simply the practice, through several years, of dissecting animals alive. Imagine the scene in the "laboratory" as a very neophyte operates at leisure upon his writhing frog, or where a student, deputed for that purpose, drags in a dog, and binds it, struggling and crying, to the torture trough, amid the jeers and brutal jests of his companions. Then begins the sacrifice, too fearful for unaccustomed ears.

This description is from the recent testimony of a student. Asked if anæsthetics were used, he said, "Oh, no; there is no time for that."

What wonder that such students testify also that they have lost all feeling for suffering? What wonder if the surgeon who has been thus taught feels no hesitation in experimenting on the helpless human beings confided to his care in hospitals? . . .

Does the student discover any new facts by his experiments? No; the facts are long known and printed in the text-books. Is any of this work in or out of schools really for the benefit of mankind? We have frequent testimony to the contrary. . . .

How many know that these practices are being imposed upon the elementary schools? We have the direct testimony of a teacher that vivisection is being taught to classes of children of ten years of age. One result of these teachings is their hardening effect. Still worse is the undoubted stimulation, in many cases, of a love of cruelty for its own sake. . . .

What unperverted mind does not know that the cultivation of the humane sentiment is of more importance to the progress of the world than any scientific fact?

Shall our frank, kindly lads and gentle daughters be hardened and degraded by such training as this?

THE NEW MEMBER OF THE MEDICAL COUNCIL.

(FROM THE "CHEMIST AND DRUGGIST," OCTOBER 16TH.)

Mr. Victor Horsley, F.R.S., President of the Medical Defence Union, has been elected to the General Medical Council in succession to Dr. Rentoul, who resigned. This election is especially significant in view of the demand

of the medical profession, which Mr. Horsley emphatically endorses, for a larger proportion of direct representatives on the Council. His election is the most conclusive argument against that claim which could have been provided. The Medical Council is authorised to exercise supreme judicial functions in certain important cases on behalf of the public. Mr. Horsley is now one of these magistrates, and he was chosen because he made the boldest bids, promised the most vigorous efforts, and was believed to be the most likely candidate to carry these into effect. The electors are in the position of parties to the suits which come before the Council, and they would like to have a predominant influence on the bench. Mr. Horsley would render all medical practice for gain by unregistered persons illegal, and would declare that a medical man who sells his services to a medical-aid society which touts for members is guilty of infamous conduct in a professional sense. This is what the medical profession want, and what they demand should be the prevalent spirit on the judicial bench of the Medical Council. And with that object manifest and declared they are going to ask Parliament to help them to carry out their programme. There is not the slightest danger to the public, to chemists, or to any other outsiders. Mr. Horsley is a clever man, but he is not clever enough to get an Act of Parliament such as he and his constituents want. The body which he can do most harm to is the General Medical Council.

THE ANIMAL VACCINES MANIA REACHES THE RIDICULOUS.

Here, according to M. Emile Gautier (*Chronique Scientifique*, September 15th), is what is passing to-day in the practice of medicine:—

"Vaccines are the fashion. They vaccinate against anthrax, hydrophobia, smallpox, yellow fever, tetanus, croup, and the venom of reptiles. They speak of vaccines for consumption, pneumonia, influenza. They will probably hereafter vaccinate against every malady—at least till they shall have found a single vaccine for general use.

"What is most curious is that the use of vaccine threatens to be extended from men and animals to plants. Since a microbe has been found in chalk, in potash, and in chemical manures, the question of vaccinating the vine against phylloxera has been raised; and some people even speak of vaccinating the earth itself in order to poison all the hurtful germs that it cherishes in its bosom. Already the Germans are producing and selling readily, under the name of *nitragine*, a powder which is neither more nor less than the product of nitrogenous bacteria. This powder is offered in little bottles, each containing sufficient to inoculate an acre or more, and on each bottle is indicated the species of vegetables for which the contents are intended."

THE ELECTORAL LEAGUE AT THE BYE-ELECTIONS.

The Electoral Anti-Vivisection League has recently concluded a very successful campaign in the East Denbighshire bye-election. Its representative, Mr. Arthur Westcott, worked there for a period of ten days in supporting the candidature of Mr. Samuel Moss, who was the most favourable to our views. Mr. Moss is thoroughly sound on our question. He takes the moral view, and is prepared to go as far as any on the humanitarian side. The mining villages of Rhos, Brymbo, Minera, etc., where most of the work was done, were virgin soil. It was the first time these simple colliers had heard anything about vivisection. But in a little time they responded to the lecturer with the greatest enthusiasm, surrounded him in demanding pamphlets (of which a great number were distributed), and passed unanimously strongly worded resolutions. The greatest sensation was caused when two placards, depicting a dog and a rabbit being vivisected, were shown to the men of Rhos. Then their language burst all bounds. After this, Mr. Moss's return by a majority of 2327 was very gratifying. The Victoria Street Society granted money towards the expenses, 10 large picture placards, and 5000 pamphlets.

The Electoral Anti-Vivisection League also interrogated the candidates in the Barnsley bye-election, but as they were all more or less favourable to our views there was no one to fight.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, MONDAY, NOVEMBER 1st, 1897.

THE NATIONAL ANTI-VIVISECTION SOCIETY.

FIRST MEETING OF THE COUNCIL.

THE first meeting of the Council of the National Anti-vivisection Society—the new and convenient title of the organization which our friends have so long known, first as the Victoria Street, and later as the Victoria Street and International Society—was held at the house of the Hon. Stephen Coleridge, 7, Egerton Mansions, S.W., on the 6th of October last, when the following attended: The Dowager Countess of Portsmouth, V.P., Bishop Barry, V.P., and Mrs. Barry, Hon. Mrs. Arthur Henniker, Hon. Stephen Coleridge (Hon. Sec. and Treasurer), Lady Pender, Sir Arthur and Lady Arnold, Col. and Mrs. Benson, Miss Rhoda Broughton, F. E. Pirkis, Esq., and Mrs. Pirkis, Ernest Bell, Esq., Mrs. Arthur J. Walter, Miss A. L. Woodward and Rev. L. S. Lewis (deputation from the Church Anti-vivisection League), Miss S. S. Monroe, Miss Ellen Elcum Rees, Miss Olive S. Bryant, Dep.-Surgeon-General Thornton, C.B., Dr. Berdoo, Mrs. E. M. James, Rev. Albert Lee, Lester Reed, Esq., Mrs. Lester Reed (Hon. Sec. Friends' Anti-vivisection Society), Mrs. W. A. Brown and Mr. Rorke (Hon. Secs. Nottingham Branch Society), Mrs. Robie Uniacke, Rev. Oliver W. Darling (delegate from Macclesfield Branch), Mrs. Leycester, Miss E. Watts Phillips, Hon. Sec., and Miss Bisdee (delegation from South London Branch), Rev. A. H. Cunningham (Hon. Sec. Reading Branch).

The Right Rev. BISHOP BARRY, as a Vice-president of the Society, took the chair in accordance with the new rules.

The SECRETARY having read the notice convening the meeting, next proceeded to read the letters of several members who were unable to attend, and of whom the following is a list:—The Earl of Strafford, Viscount Pollington, the Bishop of Southwell, Lord Leigh, Lord Llangattock, Bishop Cramer-Roberts, Bishop Mitchinson, the Countess of Seafeld, the Hon. Mrs. R. C. Boyle, Mr. F. A. Channing, M.P., Mr. J. Swift MacNeill, M.P., Canon A. Percy Smith, Mrs. Frank

Morrison, Miss Betham-Edwards, the Rev. Dr. Newman Hall, Miss Marston, Mrs. William Grey, Mrs. Rathbone, Mrs. Wm. Dunn, Mrs. Luther Holden, Miss Marriott, Mr. Edmund Parker, Mr. M. Thornhill, Mrs. P. Strappini, and Miss M. B. Gaskoin.

Letters of regret were also received from the following, representing branches and auxiliaries of the Society:—Mrs. Herbert Philips (Manchester Branch), Miss Isabella Southall (Midland Association P.K.A., Birmingham), Miss Richards (King's Heath, Birmingham), Miss J. E. Metford (Weston-super-Mare), and Miss M. I. Booth (Macclesfield).

ELECTION OF THE NEW EXECUTIVE COMMITTEE.

The list of nominations for the Executive Committee was then circulated to those entitled to vote, and a ballot was taken, with the result that the following were elected:—Mrs. Adam, Lady Arnold, Ernest Bell, Esq., M.A., Col. S. M. Benson, Mrs. Benson, Dr. Berdoo, Miss Rhoda Broughton, Miss Olive S. Bryant, the Countess of Camperdown, Dr. John H. Clarke, Hon. Stephen Coleridge, Rev. Ernest Fischer, Hon. Mrs. Arthur Henniker, Mrs. E. M. James, Mrs. Leycester, Miss S. S. Monroe, Mrs. Frank Morrison, Mrs. Nicholletts, Lady Pender, F. E. Pirkis, Esq., R.N., Mrs. Lloyd Price, Lester Reed, Esq., Mrs. Roscoe, Mark Thornhill, Esq., Deputy-Surgeon-General Thornton, Mrs. Robie Uniacke, and Mrs. Arthur J. Walter.

THE PROPOSED HOSPITAL.

The Hon. STEPHEN COLERIDGE then moved the following resolution in reference to a proposal, for which subscriptions have been solicited, to found an Anti-vivisection Hospital:—

"That inasmuch as the object of this Society is to maintain a constant fight against existing vivisection, and not to erect institutions from which the practice shall be excluded, the Council declares that its Committee should not actively participate in the project of founding and maintaining an Anti-vivisection Hospital."

Mr. COLERIDGE supported his resolution by stating that the foundation of a hospital was not the object of the Society, and that attention, and probably funds, would be thereby diverted from their true object, which was to present a united front in opposition to the practice of vivisection and those who pursue it. He had heard a rumour that here was an expectation that somebody had left in a will a sum of money for an Anti-vivisection Hospital, but he knew of people who had altered their wills—it was an undoubted fact that people did alter their wills—and he preferred not to reckon on any insubstantial source of means of that kind, but to wait until any promised bequest was actually available. In the meantime he did not wish to prevent any friends of the anti-vivisection movement from contributing to hospitals and pointed out that there were already two hospitals in existence, namely, the Bolingbroke at Wandsworth Common, and the Mildmay, Mildmay Park, at the East end of London, to which they might safely do so. For these reasons he submitted his resolution, and hoped it

would be passed. If, however, the decision went against him he was prepared to accept it and loyally abide by it. (Applause.)

Dr. BERDOE seconded the motion, endorsing the arguments of Mr. COLERIDGE, and pointing out the difficulty there would be in organizing an adequate medical staff for any such hospital as that proposed, especially in regard to surgical operations. (Hear, hear.)

The Rev. L. S. LEWIS then proposed the following amendment:—

"That, inasmuch as this Society is pledged to the total abolition of vivisection, this Society, if true to its purpose, must not, and does not, hesitate to attack the very fountain head of vivisection—hospitals; and further, inasmuch as to do this without providing other refuge for the sick poor would be only to incur general hostility towards anti-vivisection, the only possible course for this Society to do (unless it retires from the heat of the fray, and ceases altogether to attack hospitals) is to continue to collect for and aid in founding an Anti-vivisection Hospital."

Mr. LEWIS supported his amendment by denying that the Victoria Street Society, as the resolution implied, was asked to found a hospital, and said that the opposition to the existing hospitals and the experimentation that went on there was the core of the anti-vivisection attack, and that he thought that the foundation of an Anti-vivisection Hospital was a necessary alternative for the people whom they warned against going into those at present existing. He stated that the Victoria Street Society had already passed a resolution in favour of such a hospital,* also that £1,000 had been already raised for the purpose, with promises of another £1,000 if nine more were raised, and of another £50 if nine more were raised. Of these latter all but one £50 had been promised.

Miss WOODWARD seconded the amendment, and said the late Mrs. Honeyman Gillespie left £30,000 which, after the death of certain annuitants, was to be devoted to found an Anti-vivisection Hospital, the trustees being Surgeon-General Gordon and Dr. A. Wall.

Sir ARTHUR ARNOLD said they were all in favour of hospitals, but he did not consider that to found a new one was the proper object of the anti-vivisectionist party, and he must, therefore, support the resolution.

The Rev. ALBERT LEE, Lady PENDER, and Mr. LESTER REED also supported the resolution.

Miss S. S. MONRO expressed herself in favour of the amendment.

Lady ARNOLD suggested the insertion in the original motion of the words "at present," before "actively participate in the project," and Mr. COLERIDGE assented.

The CHAIRMAN then put the amendment to the meeting, and as only five hands were held up in its favour, declared it to be lost. On the original resolution being submitted to the Council, the large majority of

those present voted in its favour, and it was declared to be carried.

Thanks having been voted to Mr. COLERIDGE for so kindly lending the use of his house, and to BISHOP BARRY for presiding, those present were invited to take tea before retiring.

We have received the following letter:—

THE LATE MRS. HONEYMAN GILLESPIE'S BEQUEST.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—As I was present at the meeting of the Council of the National Anti-vivisection Society on the 6th ult., and heard it stated that the late Mrs. Honeyman Gillespie left £30,000 for the purpose of founding an Anti-vivisection Hospital, I have looked into the matter. The result is that I find that Mrs. H. Gillespie's bequest does not mention a Hospital at all, but deals with a Medical School, where, *inter alia*, homœopathy is to be taught. Perhaps it will be useful to cite the material part of the will, thus:—

"I direct my trustees to apportion, lay aside, and invest in terms of the powers of investment after conferred, the sum of £30,000, and to apply the free income of the same, or, in their discretion, the capital, or to accumulate the income wholly or partially along with the capital, and apply the income or capital of the accumulated amount, and that for the purpose of founding, or contributing to found [a] new School of Medicine, and failing any subsequent and more detailed expression of my intention, my wish is that such School of Medicine shall be established in such part of the United Kingdom as my trustees, after advising with Surgeon-General Gordon, Honorary Surgeon to the Queen, and Abiathar Wall, Esq., Member of the Royal College, England, may think fit, and shall embrace, as well as ordinary medical studies, the teaching of Homœopathy and other new and useful medical discoveries, and in which school the practice of vivisection shall be entirely prohibited," etc.

The interest of the fund indicated is at present employed in paying certain annuities also bequeathed by the testatrix, and years must presumably elapse before the money is liberated for any other purpose whatever. When it is so liberated there is nothing to require that the medical school shall be attached to any hospital.

I am, Sir, yours truly,
B.

October 13th.

THE VIVISECTOR'S PROGRESS.

In a letter addressed to one of our friends who had sent a copy of our article on "The Vivisector in the Lunatic Asylum," to OUIDA, the distinguished authoress says, "I have long been convinced that the greatest tortures await humanity at the hands of doctors and scientists. It is impossible that being allowed every form of animal torture they should not go on to the demand for human subjects."

The lunatic asylum affords every opportunity for safe research on human beings. An insane Italian was lately used at Modena for some experiments in blood-transfusion by professors who purposely produced apoplexy in their victim, who was greatly to be pitied, as his madness was caused by financial troubles due to no fault of his own. This is the sort of experiment

* We learn from the mover of the resolution here referred to that the proposal it contained was only intended as a momentary alternative to giving to the ordinary collection for the general hospitals, or the Prince of Wales' Fund.

which would be made on a condemned criminal given up to scientific research, when the demands of such men as Dr. J. S. PYLE, for "the proper use of human subjects," shall be unhappily granted. But the lunatic asylum requires no Act of Parliament for such a matter. The researcher's conscience alone safeguards his patient. The hospital has its risks, for the patient can usually speak—the lunatic finds no listeners. Though the vivisector masquerades as the friend of humanity, he is its greatest enemy. The friend protects the weak and helpless; the researcher, for his own advancement, selects them for his victims. He uses them with as little compunction as he uses his dogs, rabbits, and guinea-pigs. The one class is to him mere laboratory material like the other. This is what Vivisection really is, as the readers of this Journal do not need to be told.

What are we coming to? Is this the worst? We fear not. There is a lower depth. After physiology comes psychology. Physiology, except in its more transcendental aspect, is almost played out. There is not much more to be learned about the material part of the animal system than our great physiological text books have to tell us, but psychology is all but a *terra incognita* to the researcher. The vast untrodden fields of inquiry which await the experimental psychologist will require their victims, as the sister science has demanded its holocausts; and they will be human victims. Mr. COMPTON READE, in his remarkable novel, *Broken Threads*, has powerfully indicated the direction in which the vivisector of the future will pursue his investigations, in the chapter entitled "What the Doctor Advised." Says the scientist:—

"What you term horror is, in fact, the rarest of luxuries. Can't you imagine the great SCHIFF's emotions when he describes the keenly pleasurable anticipation of causing the intensest torture to a sentient creature? Talk about wine, talk about women, talk about all the delicacies that ever tickled the human palate! What are these thread-worn pleasures compared with the new lust that science has invented, borrowing the original idea from the Inquisition, but developing it indefinitely? Some day we shall advance one step further, and enjoy the agony of vivisected criminals; but for that, public opinion is not yet ripe. The Christian superstition blocks the way."

He expatiates on the sublime pleasure of inflicting pain, emphasises the fact that the mind is the most sensitive portion of our corporeal functions, and glories in the idea of breaking a woman's heart in the interests of holy, beautiful science. Researchers will study the effects of disappointment in the female system philosophically, selecting exemplars of refinement and sensibility, just as the physiologist tries his severest experiments on dogs as being nearest to the human species. He will, in the future, leave the lower animals to engage a suitable subject's affections, play with her as with a hooked fish, laugh in her face, and note the results with stethoscope, sphygmograph, and ophthalmoscope. He will get rid of the old blind superstition concerning right and wrong, and declares:—

"It would be perfectly right, for instance, to ruin an

innocent girl if, thereby, science would be benefited by an accurate diagnosis of the correlation of mind and matter—in other words, if you could exhibit the results of mental disturbance on the bodily functions of the female subject. The amount of disturbance would vary according to the temperament, from melancholia or homicidal mania, down to mere chronic ill-health or phthisis. . . . Unluckily the canine species cannot last under the knife as long as we should wish, and subjects are very expensive. But at the longest a healthy dog does not live, after a series of painful experiments, more than a week. Whereas, when you vivisect the delicate fibre of girls' emotion, the torture experienced is never hebetated and lasts with life."

With the vivisector at work in hospital and asylum no one can say that all this is absurd and impossible. On the contrary, it is not only possible but probable. The effects of hope and fear, of sudden shock or mortal terror, of joyful anticipation or depressing prospect, must be in some way or other followed by material changes in the organism. In a hundred ways a heartless researcher might find it interesting to test these effects. The effect of shock on the heart might be tested with the sphygmograph. Diabetes might be induced by mental disturbance. Terror might be employed to modify the health of the blood and the nutritive functions might be made to undergo profound modifications under the influence of agitating and alarming mental conditions. Can it be doubted that the men who would torture lunatics to the point of frenzy would not hesitate to do these things, as the novelist suggests, if thereby they could make important psychological discoveries and win fame by posing as benefactors of the human race? A brilliant paper for the Royal Society on "The influence of terror on the number and character of the white corpuscles of the blood," would be ample reward for any such pangs of conscience as might disturb the researcher who considers the soul a mere function of the body like the sight or taste. The new vivisection which Mr. COMPTON READE suggests is but a development of the practices of to-day. The licensee of the Society for the Advancement of Medicine by Research has in him the makings of the mind-torturer who will be to psychology what the vivisector is to physiology.

CORRESPONDENCE.

PASTEURISM AND INDIAN DISAFFECTION.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Many people hold the same opinion as your correspondent, Mr. Joseph Collinson, that a leading cause of the disaffection in India is the attempt to force upon the natives the system of inoculation for zymotic and some other diseases, with Pasteur Institutes for the elaboration of these viruses, of which a certain section of the medical faculty are so enamoured.

As in no part of the world are there to be found greater refinements of brain than amongst the Hindoos, it is hardly likely that they will passively submit to be used as material by western experimentalists. Microbes, like snobs, have "had their day, but have not ceased to be," notwithstanding the 366 deaths after Pasteur's treatment for hydrophobia, and the signal failure of all Dr. Koch's tuberculin enterprises. On the contrary, they continue to increase and multiply and replenish

the decimated ranks of their exploded congeners, providing the prolific brains of their bacteriological sponsors with the interesting duty of inventing some pedantic cognomen with which to distinguish the micro-organic offspring of their thaumaturgic individualizing powers, from those announced by other geniuses of the same calibre.

Before these physiological illuminati go so far as India to work their therapeutic miracles, would it not be more modest of them to perform a few record cures amongst their scientific collaborators? But then, of course, a prophet hath no honour in his own country.

I am, Sir, yours truly,

MAURICE L. JOHNSON.

Baker Street, Weston-super-Mare.

THE REV. BARING GOULD'S "A STUDY OF ST. PAUL."

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I am simply amazed that the author of the book you mention in your October issue could so misconstrue the question of the tender-hearted St. Paul ("Doth God take care for oxen?" 1 Cor. ix. 9) as to remark that it "betrays the innate cruelty of the oriental minds towards animals." Now any open-minded person, after consulting the revised or even the ordinary version, must perceive that St. Paul simply asks whether the injunction of Moses he quotes was written to show how God regards oxen or to constrain us to properly remunerate those who minister to our necessities. He concludes that it was written with the latter object, as I think any unbiassed person will also conclude who turns up Deut. xxv. 4, and finds that this command of Moses occurs in a chapter which from beginning to end deals with men's relations to one another.

As to "innate oriental cruelty to animals," surely the vivisection, cock-fighting, hare-coursing, rabbit-worrying, rat-baiting, horse-beating, pigeon-shooting, game-hunting, bird-plucking of Anglo-Saxons, with which we are all so sadly familiar, should for ever shut our "occidental" mouths.

I am, etc.,

FRANK SPENCE.

Manchester Alum Works, Manchester,
October 6th, 1897.

TREATMENT OF HYDROPHOBIA.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—I am informed by a correspondent that "A groom named McCluskey, bitten a few days ago in Belfast by a rabid horse, which was subsequently shot, has been sent by the local authorities to the Pasteur Institute for treatment."

Without expressing any opinion, one way or the other, on the sanity of the horse, it seems a somewhat strong measure to saddle the ratepayers with the cost of sending this man to Paris. Had the efficacy of the Pasteur treatment been undisputed, then perhaps I might have seen the matter in a different light. The worthlessness of the system is attested by the long list of failures, which grows apace; and for that reason, if for no other, I am certainly of opinion that the authorities have acted most unwisely.

As in many cases the bites of so-called rabid animals do no harm, there is the grave danger to consider that the effect of the Pasteur injections is sometimes fatal of itself. Little Ethel Wilkins, of Twickenham, received forty-eight inoculations of rabic virus at the Pasteur Institute, and died on November 10th, 1895, of hydrophobia, the victim of a cruel craze! Her case indicated artificially-communited rabies, or what is known as "hydrophobia of the laboratory."

The absurdity in thus wasting the ratepayers' money and endangering this man's life, when the Buisson treatment is open to all patients, is only surpassed by the blind faith and ignorance which have led the man to submit himself to such an objectionable and cruel method of treatment.

It is indeed high time a strong protest was raised against the squandering of public money in any such manner; for the case I have cited is by no means an isolated one. In March last, for instance, the Limavady Board of Guardians sent to Paris for treatment five children who had been bitten by a "supposed" mad dog. I could add to these cases; and, need

I say, the guardians are nearly always unanimous in their decisions. Of course, they generally are, when they are bent upon doing what they ought not to do.—I am, yours etc.,

JOSEPH COLLINSON.

53, Chancery Lane, London, Oct. 21st.

FOREIGN INTELLIGENCE.

FRANCE.

FAILURE OF SEROTHERAPY IN LEPROSY.

At to-day's sitting of the Academy of Medicine M. Hallopean read the Report of the Committee which had been entrusted with the experiments as to the treatment of leprosy by means of a serum sent by M. Carroscuilla, of Santa Fé de Bogota. Several cases were treated at the St. Louis Hospital, but up to the present the treatment has given absolutely no results. M. Hallopean presented to the members one of the patients who had had the serum injected. It was found in his case that the symptoms of leonine leprosy he displayed were as marked as before treatment.—*Standard* Paris correspondence, August 30th.

DEATH OF M. CHAVÉE-LEROY.

We announce with regret the death of M. Chavée-Leroy, an enlightened adviser of French agriculturists, silk and wine growers, and opponent of the theories and teaching of Pasteur. Dr. Hubert Boëns, of Charleroi, writing of him in *Le Médecin*, says:—"He had been associated with us for many years, in combatting the erroneous doctrines which the agricultural officials of France, prompted and inspired by Louis Pasteur, have propagated among the sericulturists and viniculturists of their country. He was one of the first, in France, to recognise and state that the greater part of the diseases of vegetables, whether of the air or the earth, annual or constant, proceeded from the lack of suitable aliment for the different plants in the soil and of pure air in the atmosphere. He knew that in plants, as in animals, vermin, grubs, microbes, and all the host of microscopic germs, without the action upon them of healthy surroundings, are agents of decrepitude and death, and most formidable for such as are ill-nourished, ill-cared for, and not properly aerated." M. Chavée-Leroy did much to show that Pasteur's claim to have saved the silk and wine industries of France was unfounded.

PARISIAN PURVEYORS OF VIVISECTIBLE ANIMALS.

On the first of September the *Daily Chronicle* and other London morning journals published the following:—"Madame Alexandre is not likely to become a *persona grata* to the opponents of vivisection. Indeed, few persons of sensitive feeling can contemplate her career without a sigh. She is the purveyor of rabbits, guinea-pigs, and white mice to the eminent physiologists of Paris and Europe generally. Her stall in the Marché Saint Germain is a sort of exchange for the votaries of experimental research, and there she sits surrounded by hundreds of her little pets all in their condemned cells. Their mistress treats them well, for it is her interest so to do, and her establishment is renowned for supplying none but healthy, well-fed animals, capable of resisting a good deal of torture. One of her mice is worth in October, when the schools of medicine re-open, at least a franc, and by that time she will have a stock of two thousand. Withal, Madame is said to be a kindly woman, and she strongly objects to subjecting living creatures twice to the ordeal of the scalpel."

Our senior hon. correspondent in Paris, Mr. Philip Serle, has, at our request, lately interviewed the old lady with the view of testing the truth of this story. Writing on the 20th ult., he says:—"I have been to see Madame Alexandre at the Marché St. Germain to-day. She is a pleasant little woman, and very civil. She has a small stall in the market, where you can buy game and poultry, but I imagine her great business is the supply of the laboratories. She showed me about two dozen guinea-pigs, and a round box with a wire cover, with a number of white mice in it, among which were many recently-born young ones; but her principal stock is kept in a shed in the neighbourhood. She declined to show me this, as she said an English paper had made false statements about her. She was, however, quite willing to tell me

all I asked. She said now that the medical session had commenced she had a large stock of live animals, but the chief demand was for guinea-pigs, as they were so strong and healthy. Cats she did not do much in, as doubtless they are not popular, being disposed to vivisection their tormentors. I asked her whether she had no scruples as to supplying these unhappy creatures, knowing to what they were destined, but she did not seem to see any harm in it. 'If I did not do it,' she said, 'some one else would, and when I have sufficient means I will give it up.' This is quite characteristic of the French; with the exception of a limited number of sensitive people, they care nothing as to what is done, and this is the great impediment to any work undertaken by our Anti-vivisection Society."

The *Thier-und Menschenfreund* reports that since the bacillus era of Pasteur began, the business of supplying laboratories with small animals for the microbe hunters has attained an unlooked-for development. We were already sadly familiar with the dealer in frogs who tramped with his living freight of batrachians from one physiological institute to another. But to him must now be added the mouse-breeder, who, in pursuit of his honourable profession, has dealings with schools and colleges and has become even in a manner a government contractor. One of these mouse-breeders has entered into a formal contract with the medical faculty to supply a certain number of mice at an average price of sixpence each; an exceedingly high price even when compared with the high price per pound of butcher's meat. The "lady" who supplies the Pasteur Institute with mice is said to have obtained a yet higher price per mouse.

GERMANY.

ALLEGED RATIONAL REMEDY FOR TUBERCULOSIS.

The *Standard's* correspondent, writing from Berlin under date of September 29th, reported that Professor Landerer, a distinguished surgeon in Stuttgart, has for seven years past been using a salt of cinnamic acid, soluble in water, as a remedy for tuberculosis. He has treated about four hundred patients in this way, and hopes that he has effected a lasting cure in almost all cases.

AFRICA.

SPREAD OF THE RINDERPEST.

According to a Berlin telegram, published in the *Standard* on the 30th of August, the rinderpest had spread from German South-West Africa to Angola, and from the Transvaal to Lourenço Marques. The Portuguese Government was much alarmed by the appearance of the pestilence in its West and East African possessions and was taking steps to prevent its extension.

ZÜRICH.

THE REGULATION OF VIVISECTION.

It will be remembered that in December, 1895, the people of the Canton Zürich practically gave their government a vote of confidence, it being understood that some action would be taken early in 1896 with the object of establishing some control over the practice of vivisection. Nothing was done, however, until the following autumn, when a commission was appointed to consider the matter. We learn from the *Neue Zürcher-Zeitung* (New Zürich Journal) that this Commission has now presented its majority report in the form of certain resolutions which have been submitted to the Canton Council for consideration and adoption. It appears that there was an understanding between the government and the majority of the commission that the resolutions should be adopted, and although a recently appointed member of the government, apparently ignorant of the understanding, objected to any interference with the means used in scientific investigation (even, we suppose, when these include experiments on human beings), the resolutions with some slight modifications were passed. They are as follows:—

I. That vivisection consisting of blood-shedding operations on living animals as well as all experiments on them which so alter the conditions of life as to cause them passing or lasting suffering, shall be prohibited save for the purposes of scientific investigation and instruction.

The reporter described this as "a compromise between intellect and science on the one hand and sentiment on the other." Herr Scheller moved as an addition "that vivisection be only used where absolutely required for the proper understanding of a lecture." But the object of this was considered covered by §IV. and it was not accepted. Professor Hess moved the omission of the words after "all experiments" as far as "suffering," but this amendment was also rejected.

II. That the practice of vivisection be limited to the Medical Faculty of the College, to the Veterinary College, and to the Zoological and Hygienic Institutes of the College and the Polytechnic.

An amendment to lessen and another to increase the number of the institutions were rejected. The increase was moved with the intention of extending the permitted practice of vivisection to hospitals, and in particular to the Canton Hospital, Winterthur. The mover, not content with his defeat, presented at the next sitting of the Council, a petition from the medical profession asking for the reconsideration of the rejected amendment so far as the Winterthur Hospital was concerned. This was granted, but the amendment was once more rejected, this time by 68 votes to 55.

III. That vivisection shall be practised only by the principals of the institutions mentioned in §II., and by the assistants appointed by them, acting under their special superintendence.

An amendment to make this more stringent was moved by the minority of the Commission, but rejected.

IV. That the practice of vivisection shall be limited to that which is absolutely necessary, and that the heads of institutions shall furnish a precise list at the end of each term of the experiments performed, stating the different kinds of animals used and the objects of the experiments.

Councillor Ernst objected that the experiments were already limited to what was absolutely necessary, and rendered painless by the use of narcotics. And as for the list it would only be used for maintaining the agitation against vivisection. The resolution, however, was carried.

V. Wherever possible an animal shall not be subjected more than once to experimentation; and in all possible cases a thoroughly effectual narcotic shall be used.

Professor Hess said that it had been proposed to forbid the use of curare, but he considered the resolution which stated that the narcotic must be "thoroughly effectual," did not require the addition of this prohibition. The resolution was passed in its original form.

VI. The undermentioned operations performed for the benefit of animals shall not be considered as vivisection, and shall remain unaffected by these resolutions:—

- (a) *Operations necessary in the keeping of animals and in veterinary surgery.*
- (b) *Inoculations for the investigation, prevention, and cure of diseases.*

Judge Müller moved the addition:—"of men and animals" after "diseases," and the resolution so amended was carried.

VII. Infringement of these regulations shall be punishable by a fine of, from 10 to 500 francs, according to the amount of suffering caused and the brutality of disposition shown, and to the amount of offence given. In case of repetition the fine may be doubled and accompanied by a sentence of imprisonment for a period not exceeding three months. In trivial cases the fine may be reduced, but only exceptionally, to five francs, in accordance with Clause IV. of the Act of December 22nd, 1895.

VIII. These regulations shall come into force at once.

AMERICA.

THE ROENTGEN RAY AND VIVISECTION.

FROM "ANTI-VIVISECTION."

Just as we predicted, the Roentgen ray only furnishes food for further cruel experimentation—instead of doing away with the necessity for it. We subjoin the following from the *Aurora* (Ill.) *Daily Express*, which simply supplements other statements we observe from time to time: "If the doctrine of reincarnation be true, the guinea pig, when its turn comes to be re-embodied, will have a long score against man to be paid off. Man in making alleged scientific experiments has dosed it with poisons, has suffocated it with gases, has tortured it to death by inches with surgery and by removing

the sections of its brain, one at a time. The hapless little creature has been made the victim of Roentgen ray experiments as the latest species of torture that could be invented for it. Dr. J. Brunton Blaikie, no doubt, thought it highly scientific to inoculate four guinea pigs with diphtheria poison and then pour the Roentgen rays into them for thirteen hours. It was necessary, indeed, to stop the stream awhile, not out of mercy to the pigs, but for fear the tube through which the rays passed would be injured, so that the little creatures did not get the torture the whole thirteen hours. Learned men may consider this science. The common sense of plain people sees in it only monstrous cruelty, the end and aim of which not at all justifies the means."

PICKINGS FROM THE "JOURNAL OF ZOOPHILY."

Dr. Leffingwell has written a letter to the New York *Evening Post* specifying his exact position with regard to vivisection, Miss Anna Sargent Turner having sent a letter to the same journal in which she spoke of him as one of the prominent anti-vivisectionists of the day. He says: "Since July, 1880, seventeen years ago, when my first article in favour of State supervision of animal experimentation appeared in *Scribner's Magazine*, I have never written a line against vivisection when surrounded by adequate safeguards against cruelty or abuse." He therefore says that he is not an anti-vivisectionist, but we who call ourselves most decided anti-vivisectionists do not differ from him materially. We, too, might not object to vivisection were it free from all cruelty and abuse. The point in which we do differ from our highly esteemed colleague is, that we do not think it possible to eliminate from the practice all cruelty and abuse, while he appears to consider it practicable.

We learn with regret that the husband of our esteemed co-labourer in the anti-vivisection field, Mrs. Fairchild Allen, was removed by death a few weeks ago. This loss, irreparable to her, is also great to us, as, agreeing most cordially with his wife as he did, he rendered all the assistance in his power to our cause. Mrs. Allen has our most sincere sympathy in this, her hour of trouble. [And ours, too.—Ed. Z.]

A certain Dr. Paul Carus has recently been writing on the immorality of the anti-vivisection movement! He does not believe in yielding unreservedly to the sentiment of compassion, and resorts to the by no means new distortion of argument that because Christ taught a lesson of sacrifice, we are justified in sacrificing animals. He says, "Christ's mission is mainly a lesson of sacrifice, which means that salvation is obtained through suffering." Such an illustration as this is an insult to the understanding of his readers; at least of those who have read the New Testament. The sacrifice which Christ taught was *self-sacrifice*, not the barbarously cruel, long-drawn-out sacrifice of innocent and helpless creatures. To plainly speak our mind, we think such arguments are blasphemous, impudent attempts to befog the common sense of the reading public.

HOME INTELLIGENCE.

LONDON.

THE SCHOOL BOARD ELECTION.

The Electoral Anti-Vivisection League, in conjunction with other Anti-Vivisection Societies, is organizing the School Board Election campaign. All the candidates will be interrogated on the subject of vivisectional teaching in Board Schools, and especially to use their influence in altering a demoralizing chapter in Furneaux's "Human Physiology" (which is now in the hands of pupil teachers), where some painful vivisectional experiments are described.

A Manifesto will also be issued to the Electors, warning them of the danger ahead, and asking them to vote for those candidates who are favourable to our views.

Volunteer canvassers are urgently needed to distribute this and anti-vivisection literature. Those who can help in this way, or financially, are requested to write at once to the Hon. Sec., at the new office, 32 Sackville Street, Piccadilly, W.

NOTTINGHAM.

THE CHURCH LEAGUE.

Under the auspices of the Church Anti-Vivisection League a well-attended meeting took place at the Central Hall on

Thursday, September 30th. The Bishop of Zanzibar presided, and amongst those present were Dr. S. Gibbon (late Medical Officer of Health for Holborn), Dr. Charles B. Taylor, Mr. J. H. Torr, Mr. C. Hawley Torr, Mr. Amos Waters, Miss Hutchinson, and Miss Woodward (hon. secretary).

The RIGHT REV. CHAIRMAN alluded to the humane character of the work in which they were engaged, and dwelt on the ethical side of the vivisectional controversy, saying that even if vivisection could be proved to be useful to the bodies of men (which was denied by some of the most eminent doctors) he could not conceive such a way of acquiring knowledge to be the will of God, and therefore he was on all occasions ready to give his aid to the Anti-vivisection cause. His Lordship in the course of his speech pleaded for the proposed Anti-vivisection Hospital.

The HON. SECRETARY read the annual report, which stated that the income for the past year had been £42 8s. 6d., and the expenditure between £34 and £35. The report, which also stated that seven American Bishops had recently become presidents of the League, was adopted.

Mr. H. J. TORR then proposed the following resolution:—"That this meeting, believing vivisection to be morally unjustifiable, earnestly desires to see it abolished by law;" and said they wanted to take their stand on the broad principle that mankind had no right whatever to inflict pain unnecessarily upon any creature. In order to find what degree of pain animals could bear many of them had been tortured. The resolution he had moved affirmed the principle in support of which they should act. For his own part he would not be averse to some such compromise as would restore the spirit of the old Act. They had been given no right whatever to torture animals, and he considered they had a perfect right to appeal to the Church to take the question up and lead the van on this and all moral questions. He was always urging upon another organisation with which he was connected that the Church must not shut herself up in everyday life as she had done in the past. Things were settled to-day on the platform and in the streets, and if they wanted that settling in their own way it would have to be done in the same manner. In concluding, he advised them not to be faint-hearted.

The SECONDER of the motion said he took his stand on the ground that they had no right whatever, under any circumstances, to do evil that good might result.

Mr. AMOS WATERS next addressed the meeting in support of the motion, and said that in the case of an animal being vivisected, it was not merely the body that was tortured, but the mind, and the intelligence, and the will were also slowly killed. The danger of vivisection, he said, was vital.

Some vivisectionist doctors in the audience at this point asked permission to speak, which was accorded them, but their arguments were ably refuted by Dr. Bell Taylor, and had so little effect on the audience that a resolution in favour of the total abolition of vivisection was carried almost unanimously, only five persons besides the two doctors voting against it.

An election of officers then took place, and the meeting closed with the usual vote of thanks.

CHATHAM.

PROTEST AGAINST VIVISECTION.

On Monday evening, September 27th, a well-attended meeting was held in St. Michael's Schools, Chatham, under the presidency of the Rev. Father Mahon, to hear Mr. Somerville Wood, M.A., and Mr. Benjamin Bryan deliver speeches against the practice of vivisection.

Father MAHON, in his introduction of the lecturers, took occasion to pay a tribute of respect to the memory of Cardinal Manning, whose opposition to vivisection was not, he said, that of a sentimentalist, but was based on right reason. He invited discussion at the close of the addresses, assuring the audience that any one who wished to defend vivisection would meet with a fair and patient hearing.

Mr. SOMERVILLE WOOD then rose, and as he opened the subject he was careful to explain the meaning of the word vivisection, as there seemed to be some doubt respecting its meaning, one old lady having told him that she had "had it." More than 7000 experiments, he said, were performed during

the past year, and in above half that number no anæsthetic agent was used. He pointed out that in no case could good result to humanity from these experiments, as the animals were in abnormal conditions through excessive pain or the influence of drugs. Nor could they reason from experiments on animals to the cases of men and women, because a pigeon, for example, could take sixteen times the amount of opium possible to a man. But there was a very real danger to humanity, as the experiments upon animals were leading to experiments upon men and women. He supported the statement by instances. He also referred to recent cases of lunatics being dosed with poisonous drugs. He denounced such practices, though a friend of his had defended them on the plea that the poor received treatment for nothing, and that they should pay in some fashion.

Mr. BRYAN, secretary of the National Anti-Vivisection Society, followed; and, in the course of his remarks, spoke of vivisection as the "coward science," since it was the oppression of the weak by the strong.

The CHAIRMAN invited discussion and opposition, but none was forthcoming.

The Rev. G. S. HITCHCOCK, Medway workhouse chaplain, proposed a vote of thanks to the speakers. He told the audience that a workhouse doctor, who did not practice in Chatham, told him that his appointment was a very good one, because it enabled him to make experiments upon the poor.

Mr. LYNCH seconded, and the vote was briefly acknowledged.

YORK.

MR. T. A. WILLIAMS AT WORK.

In connection with the York Anti-Vivisection Society, Mr. T. A. Williams, of Bristol, lectured at the Friends' Meeting House, Clifford Street, York, on the evening of October 5th. In the absence of the Rev. Canon Fausset, President of the York Society, the chair was occupied by the Rev. W. Birks, F.R.A.S., of York.—The CHAIRMAN said that as everything that concerned humanity should concern the individual, so should everything that concerned even animals concern every one to a great extent. The humblest creature that lived had its feelings. Many medical men of standing were of opinion that vivisection was unnecessary and cruel, and that we should do our best to stop that cruelty.—Mr. T. A. WILLIAMS then delivered a stirring address, after which it was moved by Mr. A. BURBIDGE, and seconded by Mr. W. A. CLARK, "That this meeting is of opinion that the practice of vivisection, or experiments upon living animals, should be prohibited by Act of Parliament." The resolution was unanimously carried, and a vote of thanks to the lecturer concluded the proceedings.

On the same day, Mr. Williams spoke at the St. Maurice's Men's Club, giving an interesting lecture on vivisection. Mr. Williams argued that it was unjustifiable to inflict pain upon animals, even with a view to a possible diminution of human suffering. He also considered that vivisection was credited with discoveries which had really been arrived at by other means, and gave a description of a terrible experiment which he had witnessed in Paris upon the brain of a dog, and in which no anæsthetics were employed. The lecture was followed by a considerable discussion, which terminated with a hearty vote of thanks to the principal speaker.

On Sunday afternoon, October 10th, an address was given to the members of the Groves Young Men's Mission, by Mr. T. A. Williams. Mr. Williams quoted many scientific authorities to show that whatever improvement there was in the public health was due, not to vivisection at all, but to a pure and better water supply, to sanitary reform, and to a higher moral standard. Ethical science was the best of all science, and inasmuch as the only certain thing about vivisection was, as Cardinal Manning said, "certain cruelty," science should be carried on only in accordance with humanitarianism.

On the evening of the same day, Mr. Williams gave an address at the St. Saviourgate Chapel. Taking for his text Rom. viii. 22, "The whole world groaneth and travaileth in pain," he pointed out the already frightful amount of cruelty prevalent in the world, and urged the necessity for humanity to put forth whole-hearted endeavours for its alleviation.

After vigorously deploring and denouncing the vivisectioning experiments of scientists as being examples of the most horrible kind of cruelty possible, he said it was time for us to show these vivisectioners that they must submit to public opinion when morality was involved.

NEWTON ABBOT.

The annual meeting of the Newton Abbot Society for the Prevention of Cruelty to Animals was held at the Town Hall, Newton, on Monday, October 19th. The Right Hon. C. Seale-Hayne, M.P., presided over a good attendance, including the Rev. W. E. Durham (Rector of Wolborough), Captain Quintanilha (Hon. Secretary), the Revs. H. Every, R. O. Roberts, W. H. Carwithen, M. Brokenshire, and Levi Rees, Mr. Lewis Bearne (Chairman of the Urban Council), and others. Apologies for non-attendance and tributes to the good work of the Society were received from the Lord Bishop of Exeter, the Earl of Devon, the President of the Gloucestershire S.P.C.A., Lord and Lady Clifford of Chudleigh, Mr. W. Laycock, J.P., and Miss Frances Power Cobbe. Lord Clifford, in his letter, condemned vivisection because he had never been able to see that any great saving of human pain resulted, and he considered the unnecessary infliction of pain on animals a greater evil than the very smaller amount of human pain which might possibly be averted. Unnecessary cruelty to animals had a demoralising effect which was far more likely to result in human pain than vivisection was to avoid it. The annual report affirmed "that anti-vivisectioners derive much hope from the fact that obdurate upholders of vivisection are everywhere confronted by a more enlightened public opinion, and by an ever-increasing number of adherents to the cause of justice and kindness to animals."

THE EMPLOYMENT OF DIPHTHERIA ANTI-TOXIN FOR NON-DIPHTHERIAL DISEASES.

The following important letter of Dr. Lennox Browne, headed as above, was printed in the *British Medical Journal* of the 9th of October:—

"SIR,—In the *Daily Journal* of the annual meeting of the association at Montreal for September 4th, it is reported that in the section of pharmacology and therapeutics, and on Friday, September 3rd, a paper was read 'On the action of Behring's Serum in Diseases not caused by the Klebs-Loeffler Bacillus.' The effect on consumption, cancer, pelvic inflammation, lupus, etc., was discussed. In one case of tuberculosis 25,000 units were given in three months, apparently with benefit. A favourable action was reported in a case of lupus. The theory suggested was that the 'serum increased the internal secretions.' In the *Lancet* of September 25th, the list is somewhat extended. It is reported that 'cases of tuberculosis, sciatica, sarcoma, lupus, and Hodgkin's disease were treated daily for several weeks. The serum he (the author) considered as a lymphagogue. Some benefit was claimed in the tuberculous cases, and marked benefit in lupus. In typhoid fever the temperature is first raised, and then lowered. The principal efficacy of serum is that it procures sleep.' Behring's serum was further recommended for its sleep-giving properties by the same speaker in the discussion on Hypnotics, and supported by another, in the same section, as reported in the *British Medical Journal*. Nowhere do I find one word of protest, either from the president of the section or from any of the speakers, against this loose and general—one might almost say wholesale—administration of a remedy whose very existence depends on its specificity; but such a word seems to be called for, especially since the suggestion follows hard on a serious proposition emanating from Italy to treat atrophic rhinitis also by diphtheria anti-toxin.

"Were it not for the possibility that this practice might lead to most serious results, it would perhaps best be met by ridicule; but I content myself with pointing out that the recommendation strikes at the very foundation of bacteriology and of the special efficacy of serum therapeutics.

"I am, etc.,

"LENNOX BROWNE.

"Mansfield Street, W., October 2nd."

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The object of the Society is to awaken the conscience of mankind to the iniquity of torturing animals for any purpose whatever; to draw public attention to the impossibility of any adequate protection from torture being afforded to animals under the present law; and so to lead the people of this country to call upon Parliament totally to suppress the practice of Vivisection.

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Telegraphic Address: "Zoophilist, London."

asked office. 197. included for 214. +. 11.

THE ZOOPHILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 8.]

LONDON, DECEMBER 1, 1897.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE Society's Bank is now the Bank of England.

THE Rev. Canon Christopher has accepted the Presidency of the Oxford Branch Society.

IN reviewing recently a new work of fiction, by Sarah Grand, the London *Standard* remarked that "the vivisector is the modern monster in fiction." Not only in fiction, but in reality, there is only too much ground for the ascription.

MISS FRANCIS POWER COBBE has just issued, in attractive quarto form, *The Story of Karo*, which is told entirely by pictures. These pictures are twenty-one in number, and form ten effective tableaux. "Karo," we may explain, was a dog of decidedly humane and lovable instincts, and became the friend and companion of a blind man. His requital, however, was pathetically painful, as he fell into the hands of a vivisector.

THE Electoral Anti-Vivisection League was active at

both the recent elections—at Liverpool and Deptford. The candidates at those places were severally questioned on the subject; but, excepting in the case of Mr. Benn, at Deptford, who was not returned, we are sorry to say, with not the most satisfactory results.

WE welcome with much satisfaction the new Society—to be called the Maryland Anti-vivisection Society—which, as announced in our Foreign Intelligence, has just been started, having its headquarters at Baltimore. We hope that Cardinal Gibbons, who is Archbishop of Baltimore, will honour it with his patronage. This is, we believe, the ninety-fifth Anti-vivisection Society now existing.

WE regret to notice the fact that lady vivisectors and experimenters appear to be on the increase. The *Journal of Experimental Medicine* for September has the names of Caroline W. Latimer and Adelaide Ward Peckham amongst the number of its contributors.

WE have heard with interest and pleasure of the existence of the Maternity Society of England, of which the office is at 6, Southampton Street, Strand, W.C. Quite a number of the names of its patrons and vice-presidents are those of prominent anti-vivisectionists, and we are authoritatively assured that the Society is "entirely free from vivisection in any shape, directly or indirectly."

MR. WILLIAM WATSON, the poet, being an honorary member, was lately communicated with as to the change in the Society's title, when in his reply he made some remarks which will, no doubt, be generally interesting. Mr. Watson wrote:—

"What you are so good as to call 'my support' may be relied upon to remain in the future no less earnest than it has been in the past. I would the Society's earnestness were equalled by its influence and efficiency. My sympathy with its aims is based, not on any belief that the practice of vivisection is incapable of yielding results which in isolated cases may be of benefit to human beings, but on what I venture to think is somewhat broader ground; namely, a refusal to admit that the human race has any right to profit by the suffering of other creatures."

THE current issue of *The Open Court* (Chicago, November) contains a series of deeply interesting papers, mostly short ones, on "Vivisection, from an Ethical Point of View." It appears that in the June number the editor published a paper on "The Immorality of the Anti-Vivisection Movement." The contributions to the current issue are replies to that attack. The first is from the

pen of Henry C. Mercer, Professor in the University of Pennsylvania, the second from that of Mr. Amos Waters, of Nottingham, England, the third—a still fuller one—from “R. N. Foster;” while Mr. Elliott Preston, Capt. Charles C. Pfoundes, of Kobe, Japan, and Mrs. Fairchild Allen, also write.

THEN the Editor rejoins. The weakness and futility of his position may be gathered from the following lines:—

“I do not use the word ‘hate’ frequently, but I can say that I truly hate vivisection. I hate it as much as war, as operations, amputations, and other cures that remove evils. . . . The patient who would not allow the physician to cut into the living flesh of his body, if thereby his life might be saved is not a man of high moral sentiment, but a weakling.”

Much the same may be said with truth of an editor, however much he may pose as an advocate of science, who thus blindly confuses things so different.

THE journalists of Fleet Street and elsewhere waxed eloquent on the announcement, made early last month, that at the Eye and Ear Hospital, Dublin, the eyelid from a dying pig had been taken and grafted on a human being. It was added that the operation was done, “there is reason to believe, with success,” but the excited journalists seemed to conclude that it must be a success. For our part, we should very much doubt it; and even if it were, the idea is the reverse of nice. The world was informed by one journal that “the transfer of this delicate fragment, quivering with life, from the dying body of the pig to that of the man would not have been contemplated a few decades ago.” If that be so, surely mankind—with journalists—have degenerated in the interval.

DR. J. W. LOCKHART, who has an article in the *Medical Brief* for November, writes with terrible severity—all too well deserved we fear—concerning the faddists who have operated hundreds of their innocent and confiding patients into untimely graves in the sacred name of science. He asks:—

“Can it be said that the ‘moral dignity’ of the medical profession opposed Koch in his murderous pursuit of a scientific *ignis fatuus*? . . . I can not but think the Koch tuberculin fiasco left some very scarlet blood stains on another page of medical history. To-day the anti-toxin fad is staining the pages of medical history with the blood of innocent children. . . . The world paid a fearful price for the tuberculin farce. It is paying a greater price for the anti-toxin tragedy.”

DR. J. SAINT-JUST, the Paris correspondent of the *Medical Brief*, tells the full story of the Pasteurian rabbits stolen from the laboratory at Aubervilliers and distributed to the restaurant keepers of Paris. Dr. Roux and his assistants prepare all kinds of serums and toxins at Aubervilliers, and have always several hundred rabbits for inoculation purposes. These rabbits are shaved under the abdomen at the place where they were inoculated; the Customs’ Officers at the gates of the city noticed this peculiarity, but said nothing about it not being bacteriologists. None of the diners on the inoculated animals has been reported dead, so that they have assimilated in their digestive apparatus cancerous, diphtheritic, tuberculous, and all sorts of odd toxins. But as the *Medical Brief* says: “That is probably where the joke comes in.”

IT is interesting to know that the *Zoophilist* is not the only critic of the medical profession which raises

its voice against the present method of teaching medicine. The *Medical Press* (Nov. 2nd), has a caustic and trenchant article by Dr. J. McMunn, “On the Judicial Mind in Medicine.” The author says:—

“If you wish me, I can hire a man to show you men on the top rung of the professional ladder by a frog or a monkey, or the resuscitated corpse of some ancient fad. Such are the enigmas of medicine.”

REFERRING to the education of the doctor, he says:—

“And when fledged and in busy practice, look at the mill-stones he wears about his neck! He is to remember that the toxic dose of the new drug, p-diethoxyethenyldiphenylamidin for a mouse is 0.001 g., an ordinary mouse mind, not the grey churchyard mice lately alluded to in the *British Medical Journal*. Is the profession serious? Is life after all so long?”

THE *Medical Press and Circular* is still exercised in its mind concerning the problem of the origin of uric acid in the body. Physicians all recognize this agent as the cause of gout and other diseases, although nobody has discovered uric acid in the blood or tissues of healthy animals. Eat no, or very little, meat, say the doctors on one side. Eat nothing but meat, say their opponents. Eat only vegetable food, say the disciples of Dr. Haig’s school; but now it is declared by the *Medical Press* to be demonstrated that a too starchy diet favours the formation of this deadly uric acid so much discussed. “There must be some truth underlying both hypotheses,” says our *Medical Press*, and it urges us not to expect a speedy solution of the physiological problem. But we are a patient class, we Zoophilists; we expect nothing from the physiologists, so we shall not be disappointed when we get nothing.

KASSOWITZ (*Wien. Med. Worch.*) gives his overwhelming judgment against the employment of anti-toxin as an immunising agent. He says it is useless—diphtheria is just as likely to be contracted with as without it. It often causes death, and he believes that every conscientious physician should hesitate and consider whether he has the right to subject a healthy child, on account of a theoretical belief, which in no wise has been confirmed by facts, to those disturbances which everyone acknowledged frequently occur after serum injections.

DR. GEDDINGS in the *Public Health Reports*, Washington, July 30th, 1897, calls attention to the fact that both Sanarelli and Haselburg, working independently at a distance from each other, have each claimed to have discovered the microbe of yellow fever. But the odd thing is that the two microbes are not in the least similar! Geddings says that the bacillus of Sanarelli was not found in one-half of the cases he examined, and although it killed guinea-pigs when injected in sufficient quantities, the organs of these animals did not present appearances at all similar to that of yellow fever, so that the evidence that the bacillus he describes is the real cause of this disease is far from conclusive.

DR. THOMPSON, writing in the *British Medical Journal*, considers it is proved that in oil of cinnamon we have a cure for consumption. In this treatment, which does not emanate from the hell of the animals, it was found that the expectoration and cough are the first to improve, then the temperature tends to the normal, and finally the weight begins to increase—even the bacilli in the

sputum become disgusted and gradually forsake their habitat.

THE *Journal of Comparative Pathology and Therapeutics* describes some experiments by Dr. Hobday in combating chloroform poisoning in dogs by prussic acid. He claims to have been enormously successful. Very well. If experiments on dogs are so valuable as is declared, we ought to have few, if any more, deaths from chloroform where prussic acid can be obtained. *Nous verrons*. Perhaps the victims will now die of prussic acid poisoning.

THE *Medical World* (October 23rd, 1897) in an article entitled "Bacteriology not Simple," says:—

"It requires comparatively little skill and study to be a 'bacteriologist,' and probably more incomplete and unsound work is published on bacteriology than in any other science. It is so easy to create a sensation with bacteria, especially where disease, or the prevention of disease, is concerned. Many bacteriologists, unfortunately, are quite satisfied with performing a few laboratory experiments, without, at the same time, studying the disease itself, and they argue only too often from immature observations."

WE are glad to see this protest against the increasing tendency to erect bacteriology into a separate branch of medical curriculum, and to sever it from pathology and clinical medicine and surgery. A young man with a microscope, some culture tubes, and staining fluids, feels at liberty to ignore the work of the physician, and thinks he is in a position to dogmatize about a zymotic disease, with which the only acquaintance he possesses is a nodding one with the microbe that he only knows as existing at the distant end of his microscope tube.

THE *Medical World* is justly severe with University College Hospital for the recent outbreak of typhoid fever within its walls, consequent on the drinking-water pipes becoming contaminated with the contents of the tank in which the foul linen of fever patients was soaked. Whilst the highly scientific bacteriologists were studying fever germs in their laboratory the deadly microbes were being liberally distributed in the drinking water. A most discreditable state of affairs indeed.

DR. J. O'FLANAGAN, of Durham, England, writing in the *Medical Brief* for November, says he is amazed at the way the medical profession permits itself "to be led by the nose by the impudent and ignorant and baseless pretensions of a Koch, a Pasteur, and any number of hens and chickens and ganders and geese and gulls, not to say wolves and snakes." He marvels that so many learned doctors have allowed themselves to be deluded so long and so easily by the veiled and nude prophets of the new medicine who promise paradise to those who blindly follow them.

WHOOPIING-COUGH treated by injections of serum is the latest development of bacteriological medicine. M. Violi, of Constantinople, has introduced a method of introducing the serum of vaccinated heifers into children who were patients at St. George's International Hospital suffering from whooping-cough. The report winds up in the familiar manner, "It may be hoped that further experiments will confirm and develop the new method of treatment proposed by M. Violi."

THE *British Medical Journal* of November 20th reports

the discussion at Montreal as to the cause of death from chloroform anæsthesia. The conflicting opinions of different experimenters are very instructive to us. Drs. Gaskell and Shore, after certain experiments on dogs, arrived at conclusions which Surgeon Laurie, of Hyderabad notoriety, characterized as "mere assertions" and "not correct." Dr. Waller found that chloroform is seven times stronger than ether. A few weeks ago Mr. Leonard Hill stated that it was fifty times stronger.

LABORATORY experiments were adduced in support of most conflicting theories, but Dr. Powell said "No laboratory experiments can make us ignore the fact that in the reports of many fatal cases the observer distinctly states the circulation ceased before respiration," but Surgeon Laurie said those who put their trust in physiologists and believe that chloroform does affect the heart directly have an appalling number of deaths. A very pretty quarrel indeed, sufficient of itself to discredit the value of animal experimentation.

THE serum inoculations for the rinderpest in South Africa seem to have entirely failed. The *Lancet* of November 13th, reported as follows on this matter:—

"The serum method, the bile method, and the glycerinated bile method have all been tried in turn. The objection to the serum method was the large amount required to secure permanent immunity. The bile treatment certainly conferred immunity for a time; but it was accused of conveying the disease in some cases, and only certain biles could be used. Dr. Edington's glycerinated bile was introduced to obviate these objections, and it was to a very large extent successful, but the immunity conferred, though complete while it lasts, is very short-lived. It may last only twenty days, or, as some say, two or three months, but after the lapse of that time the animal is very liable to be attacked, if in an infected area."

So the boasting bacteriologists are puzzled once more, and the problem remains unsolved.

DR. J. H. HANAFORD, of Reading, Mass., has made the following outspoken declaration against vivisection, which we found in last month's issue of *Anti-Vivisection*: "Vivisection is a disgrace to our country, and would be to savage life. The brutes were made to enjoy life and to be useful to man, while cruelty to them is as certainly wicked as to human beings. This cruelty is of but little, if any service, and should not be tolerated in decent society. This tends to produce cruelty to human beings, particularly in foreigners—including surgeons, some of whom are cruel that they may make money. This cruelty to brutes should be denounced by the churches, schools, parents, especially mothers—by all who have the welfare of society in view. A great reform is imperatively demanded.—J. H. HANAFORD, M.D., Reading, Mass."

IT is, of course, a "far cry" from 1884 to 1897; but the words written by Sir Joseph Fayrer in the former year—"We are still as far off an antidote as possible"—seem as true now as they were then; that is, an antidote to snake poison, the product of the physiological laboratories. But, as we announced in the *Zoophilist* exactly six years ago, an antidote has been found quite independently of experiments on living animals, and that in the drug strychnine. Nevertheless, experiments in the laboratories have gone on, and Dr. Fraser, of Edinburgh, has affected to have found what is called an antivenin by inoculating animals with small doses of snake poison. The modest vivisectioner, however, was not

content with affecting to have got an anti-venin against the bite of a particular snake, but claimed that the serum produced through cobra venom injected into animals made them proof against the bites of all snakes.

A claim like this naturally did not pass unchallenged in the ranks of the vivisectionists. Whenever such a claim is made it must be tested, and if possible upset, by competing vivisectionists. That has been the case in the present instance. But this time the fact concerns the public more than usual. More experiments have been made by Dr. Kanthack, under the auspices of the Local Government Board, and at the public expense. The facts are recorded in the *Twenty-fifth Annual Report of the Local Government Board, 1895-96* (Medical Officers' Supplement) lately issued, and Dr. Kanthack has come to the conclusion that cobra venom serum is not effective against the bites of all snakes. Of course, there will now be more and more experiments, and what we wish to protest most strongly against is that a public department of the State should be used to promote their number.

DR. E. KLEIN, who held the vivisectionist's license, with a certificate for experiments without anæsthetics, at the Brown Institution, London, in 1896 was also, as appears by the *Report* above-named, again engaged in experimenting at the public expense. For instance, he experimented with animals in regard to the prophylactic power of serum in diphtheria, and he found that the immunity that could be imparted in no case exceeded one week in duration. So that, in the recorded cases where death has been caused by the injection of anti-toxin as a preventive, had life continued, the protection afforded would have been of the most passing nature.

THE *London Hospital Gazette*, in an article on Dr. Sydenham, the father of English medicine, who was born in 1624, says, "the whole of modern medicine and surgery has been built upon the lines of the careful observation of the phenomena of disease." But vivisectionists, like Prof. Richet, absurdly say that medicine has been entirely overturned and remade within the last ten years.

THE derivation of the word "antimony" as given by old Matthew Paris illustrates the diverse action of drugs on men and animals. Valentine, the monk, discovered antimony and gave some to the pigs of his convent. They got fat upon it. Then he administered it to his tonsured brethren as an experiment, and they died. So it was called anti-monachum, for short antimoine, antimony. This is one of "Ben Trovato's" stories probably, but there is doubtless something in it for all that.

"STUPIDITY has its sublime as well as genius," and the fact is often illustrated in the fatuous efforts of certain editors frantic to be funny at the expense of anti-vivisectionists. Thus *Table Talk* drivels about a West Indian lady who smiles derisively when a bullet is shot through her arm. She can make a pincushion of her body without feeling pain. "Ergo," says the *Table Twaddler*, "the anti-vivisectionists must be gnashing their teeth in impotent despair at this inopportune freak on the part of the powers that be." Not at all! We are in despair only for the thickness of some scribblers' heads.

CLASS-ROOM VIVISECTION.

(FROM THE "NORTH AMERICAN JOURNAL OF HOMŒOPATHY.")

Without regard to the question of vivisection in physiological research, which is in itself somewhat exposed to argument from the standpoint of homœopathic physicians, the practice of class-room demonstrations involving painful vivisection calls for unqualified condemnation. The attack of the anti-vivisectionists is at present particularly directed against this branch of the evil, while the defence seems to consist chiefly of exaltation of serum-therapy. This dodging of the issue satisfies the people, for serum-therapy is in high favour with the readers of the sensational press. But it is hardly fair. . . . No topic in medicine is so susceptible of lucid and enthralling lectures, even without illustration, as physiology. Sketches, diagrams, tables, and apparatus are valuable aids to the descriptive eloquence of the lecturer. Further there are dissections, and numerous chemical experiments, while some motions of the organs, peristalsis, respiration, heart beat, etc., can be observed in a thoroughly anæsthetized animal or "pithed" frog. The properties of nerve tissue can be rendered intelligible by experiments upon the latter subject, practically dead, while nerve distribution is best shown by dissection. But even then these demonstrations can be surpassed in distinctness by a well-arranged apparatus. We remember more exactly and with greater pleasure an exhibition of the valvular action of the heart, in which the cavities of a beef heart were illuminated, and the valves put in action by pumping water through them, than a precious view of a dog's heart giving its last irregular throbs as the chest was opened and the lungs collapsed. Ingenuity is never exerted in lines along which there is and can be no demand. While there is nothing but a careless and limited public sentiment opposed to vivisection, our dogs and superfluous cats will be cheaper than apparatus. But should the agitator succeed in prohibiting class-room vivisection, we may be sure that medical education will not suffer from lack of illustration. Contrary to the generally accepted idea, "the great body of anti-vivisectionists do not seek the abolition of all vivisection, but only what is useless, wanton, unnecessary and therefore, cruel," says the Secretary of the Colorado Humane Society. Under such a ban class-room vivisection certainly and deservedly falls. Its needlessness is its chief evil. After that comes the usual neglect of anæsthetics, the bungling of unskilled student operators, and the failure to prevent recovery to consciousness of the victim. Rare as are examples of such abuses in homœopathic colleges, we could wish for a more firm and public stand on the question. We cannot afford to countenance a practice to which the term "wanton, useless cruelty" is justly applicable. Instead of the ambiguous references to physiological demonstrations found in most announcements, which the sophisticated student interprets to mean vivisection, there should be a clear statement of the substitution of better methods.

PUBLIC MEETINGS.

THE MACCLESFIELD BRANCH.

The ninth annual meeting of the Macclesfield branch of the National Anti-Vivisection Society, was held on Tuesday evening, the 2nd of November, in the Assembly Room of the Town Hall. His Worship the Mayor (Alderman P. J. Eaton, J.P.), presided, and he was supported on the platform by Miss Annie Goff, Miss Booth (secretary), Miss Marion Brocklehurst (The Bagstones), Rev. O.W. Darling (Wincle), Rev. A. C. Jarvis, and Mr. and Mrs. H. Philips (Sutton Oaks).

Letters of apology had been received from Mr. J. O. Nicholson, J.P., and Alderman George Fountain, J.P., and Rev. J. T. Penrose and Colonel Thorp had also apologised for their unavoidable absence.

ANNUAL REPORT.

The annual report, read by the Rev. O. W. Darling, stated that the committee had to express their regret that it was not practicable to hold the annual meeting last year, as owing to the prolonged illness of the secretary, there was no one to take it in hand. Last month, Mr. T. A. Williams was engaged to come to Macclesfield and give a week's lectures, which he did, they believed, with very good results. At the evening lectures there were generally 300 to 400 persons present, most of them voters, who were unanimous in desiring the suppression of

vivisection, and in the determination to withhold their votes from any candidate who would not undertake to further their views on the matter in Parliament. Petitions to this effect were extensively signed, and exclusively by voters. By the kind permission of mill owners and others, Mr. Williams also held noon-day meetings in various mills and clubs, where he was listened to with great attention, and the thanks of the Society were due to him and Mr. Chubb for their unremitting exertions in explaining the subject to their numerous hearers. Several new members had joined the Society, and it was hoped that with the infusion of new blood into the committee, and the acquisition of an assistant secretary, the work of the Society might be carried on more vigorously and effectually than it had ever been before. The report then went on to quote one or two general matters from the annual report of the Victoria Street Society.

The MAYOR then proposed that the report be adopted and printed, and that the following officers be re-elected: Chairman of Committee, Rev. T. W. Dix; Treasurer, Miss M. Brocklehurst; Hon. Secretary, Miss M. I. Booth; Assistant Secretary, Mrs. Darling; Members of Committee, Rev. O. W. Darling, Miss Isabel Greg, Rev. W. Laycock, Mrs. Philips, Mrs. Russell, and Miss Wright. It gave him great pleasure to propose the adoption of the report, and still greater pleasure to propose the re-election of the officers of the Society. They, in Macclesfield, knew that wherever those names, all of them or any of them, were found it was in connection with all that was good, true and noble. (Hear, hear, and applause.) Whatever opinions there might be as to the abstract question, and he was not going to discuss that, anyone who had watched this question of vivisection, must have seen this point, that a few years ago when they used to attend that meeting there was a general feeling that the medical profession almost as a whole were against the society, but they could not have read their newspapers, and the various publications issued, without realizing that a great deal of intelligence, ability, and power in the medical profession were now asserted in favour of anti-vivisection as much as there were on the other side in favour of vivisection. (Applause.) After remarking that he had had the pleasure of listening to the gentleman referred to in the report, the speaker quoted as follows from a letter he had received from Mr. Harold Whiston: "May I . . . express my sympathy with any movement which has for its object the emancipation from cruelty of the four-footed dwellers on the earth, or the winged children of the air, and especially with the anti-vivisection movement. . . . A very great change is setting in throughout the country with regard to the dumb creation and we look forward with pleasure to the time when all things which live and move shall neither be tortured nor killed either to supply to man an unnatural and unnecessary food, or to advance a 'so-called' necessary form of medical research." That was just an expression of one gentleman's opinions. Those expressions were gaining favour both in town and country. (Applause.)

Mr. W. CHUBB seconded, and the resolution was carried unanimously.

BILL IN PARLIAMENT.

Miss ANNIE GOFF, the chief speaker of the evening, seconded the following resolution:—"That in the opinion of this meeting, the interests of the anti-vivisection movement demand the introduction in Parliament of a Bill for the total prohibition of vivisection, and that this meeting, therefore, trusts that the matter will receive the early attention of the newly-constituted 'National Society for the Protection of Animals from Vivisection.'" Miss Goff, in a very interesting address, pointed out the cruelty and immorality of vivisection, and argued that whatever legal restrictions had been made had been removed by the certificates granted to the vivisectioners. She believed one of the reasons why vivisection was so extensively and so persistently carried on was that there was a love of sensationalism in medicine as well as in anything else, and it was recognised that the best way to get medical appointments was to work up some scheme of vivisection, and publish it. The medical profession was tyrannised by a certain section. Nothing showed more plainly that vivisection was a vice than that its practitioners sought to bribe the people to become accessories to their conduct. They were promised physical good in return; and by that promise it was thought to buy the morality of the community. There was no man

more contemptible than he who would sell his morality for physical good. (Applause.) Having got rid of a priestly tyranny, were they going to have a medical tyranny? What was morally wrong, could never be politically, physically, or physiologically right. (Applause.)

Mr. HERBERT PHILIPS seconded, saying that if a Bill was introduced, it would be a standard to which all the different organizations for resisting vivisection could rally. (Hear, hear.) The Member of Parliament to whom that Bill would be committed would be their standard bearer, and their accredited representative; and he would be able to do something for the benefit of the movement. (Applause.)

The resolution was then carried with one dissident.

The thanks of the meeting were then conveyed to Miss Goff by the Mayor, and a vote of thanks was accorded to himself on the proposition of the Rev. O. W. Darling, seconded by the Rev. A. C. Jarvis.

THE OXFORD BRANCH.

On the evening of November 11th, a public meeting to promote the cause of anti-vivisection took place in the Lecture Hall of the Young Men's Christian Association at Oxford. The Rev. Canon Christopher presided, and there was a good attendance, including several medical students of Oxford University.

The CHAIRMAN said they would charitably take for granted that whatever their present opinion on the subject of vivisection, those who had come together that evening desired above all things to think, feel, and act so as to please God, whose tender mercies were over all his works. For to any one who recognized the authority of our Lord, and who persuaded himself that he saw which way that authority inclined, the mind of Christ must be the guide of life. Speaking of the enormous extent to which vivisection was carried on, Canon Christopher remarked that Schiff was estimated to have vivisected 14,000 dogs, and altogether 70,000 animals during ten years' work at Florence, and what had been done in Italy might be done in England if the people did not rise up and say these things should not be tolerated. After quoting several eminent doctors to show that the practice of performing experiments on the lower animals with a view to benefiting humanity, was not only fallacious, but that, as Sir Charles Bell had said, "a survey of what had been attempted in physiology had proved that the opening of living animals had done more to perpetuate error than to confirm the just views taken from the study of anatomy and natural motions." The venerable Canon expressed the hope that the holy spirit might carry with great power to their hearts that night the text, "The Lord is good to all, and his tender mercies are over all his works," and strengthen them for persevering prayer and energetic action, and concluded by moving the following resolution:—"That experimentation on living animals being indefensible on moral grounds, its tolerance in this country being opposed to a series of laws for the protection of animals and inconsistent with public sentiment, ought to be legally forbidden." (Applause.)

Dr. BERDOE, M.R.C.S., in seconding the resolution, said the question they had met to consider was a highly controversial one. On the one side they were told that the art of medicine—he called it an art advisedly—could not advance without experiments on living animals; that such experiments were not cruel as was commonly supposed; first, because they were performed for a legitimate purpose; and secondly, because there was an Act of Parliament in force for protecting animals and ensuring that all experiments likely to be painful were performed under effectual and persistent anæsthesia; that there was a large class of experiments which did not involve any pain at all, or at most no more pain than would be caused by the prick of a needle; and that under these circumstances the outcry against vivisection was due to ignorance of the facts, and was sustained by sentimentalism. He was there to voice an opposite opinion. (Hear, hear.) He was in no way actuated by a feeling of antagonism to science in itself. On the contrary he believed that the progress of civilization, the bettering of our lives and the health of our bodies and souls, largely depended upon the promotion of true and legitimate science—(applause)—and perhaps he might be pardoned for expressing the belief that the majority of their opponents erred from an imperfect knowledge of the facts. They had, therefore, no quarrel to make with science, and no unkind

things to say about doctors. Medicine was never in such a chaotic condition as it was to-day. Seeing there were hardly two patients whose diseases and constitutions were identical, that what was medicine to one might be poison to another, how could they expect experiments on the lower animals to help them the better to treat the higher animal, man? Professor Koch discovered a supposed cure for consumption by experimenting on guinea pigs, but did not learn till too late that $\frac{1}{1000}$ of the quantity of his tuberculin, which has no appreciable effect on these animals, is perilously active in man. He at the time prophesied in the *Fortnightly Review* that the professor's treatment would prove exceedingly fatal to human beings who trusted to such a fallacious test, and that prophecy was fortified by the fact that people who went to him died in a most miserable way. The much-vaunted cure for consumption was therefore discredited; people thought they had much better die at home than in Germany. (Hear, hear.) Alluding to Pasteur's discovery of a cure for hydrophobia, the speaker said he had come to the conclusion, after reading the reports relative to this prophylactic, that if they had no hydrophobia they might go to Paris and get cured, but that if they were affected with this malady they had far better stop at home—(laughter)—for if they had virus in them no inoculations of Pasteur's could do anything to save them. There was a serum for curing diphtheria, but he agreed with Dr. Lennox Browne that this remedy was very much over-rated. Dr. Browne had already made several important communications on this question, and he had authorized him (Dr. Berdoe) to state that, in his opinion, the statistics given were incorrect. This was the opinion of a man of great scientific attainments, and the chief authority on throat disease, whose words, therefore, carried with them the authority of a great name. Nor had the discovery of microbes materially altered their manner of treatment in regard to zymotic diseases. They were no better able now to treat cancer, scarlet fever, or smallpox, than they formerly were, and he had come to the conclusion that the old classic treatment of diphtheria was quite as effectual as the system now in vogue. With regard to the question of cruelty, they were constantly told that vivisectors could not be fairly called cruel, because the dictionaries told them that cruelty was the infliction of unnecessary pain or distress upon others, and as experiments for purposes of scientific pursuit were necessary, that therefore they could not be cruel. He could not see that. (Hear, hear.) Experiments on human beings might be called necessary, but it would be, he thought, exceedingly cruel to take a child out of the streets and inoculate it in order to instruct students, though, according to the etymology of the thing, he supposed they ought to be dispensed from the charge of cruelty. It was constantly said that all experiments involving pain were done under the influence of anæsthetics, but with a large proportion of experiments it was not possible to perform them under anæsthesia, as it interfered with the results, and so what was commonly used in the laboratory was the drug called curare, which when injected had the power of paralysing the nerves of motion in an animal while leaving intact the nerves of sensation. Therefore when an animal was under the influence of this drug it was as plastic as a piece of clay, and could not express either by motion, cry, or movement, the suffering which it was undergoing. A great number of very cruel experiments were daily performed under the influence of curare. He held in his hand a paper he had drawn up for Mr. Weir, member of Parliament for one of the Scotch boroughs, and which had been circulated amongst the members of Parliament, both Lords and Commons, at the close of the last session, and was referred to several times in the House of Commons. It was a report on experiments on the cerebral circulation by William M. Bayliss, B.Sc., and Leonard Hill, M.B., Assistant Professor of Physiology, University College, London, and carried out with the aid of a grant by the Government. He had challenged the professors to explain away the horrible facts contained in this report, but they could not do it, and it was therefore sufficient to say that terrible cruelty of a most awful kind could be practised, and was actually practised in England, notwithstanding the Act of Parliament for restricting the same. But he had something more serious, though perhaps not so harassing, to ask them to

listen to; he referred to a book called *Animal Physiology*, by William G. Furneaux, special science teacher under the London School Board. This book was the manual recommended for use in teaching physiology in the London Board Schools, and it was therein stated that in order to study physiology it was necessary to perform experiments on living animals. It was further stated that a large proportion of experiments performed in the physiological schools and schools of bacteriology involved no pain more severe than the prick of a needle. It was perfectly true that the operation of injecting virus or serum by means of a needle did not entail very great pain in itself. But this was a *suppressio veri*, because the effects of inoculation in some cases were exceedingly terrible. Let them, for instance, imagine what the virus of rabies so introduced would produce in animals. Then what would be the effect of this study—what more particularly was the effect of bacteriological inoculations? Unless the experiment were verified on human beings it was absolutely useless for purposes of medical science. (Hear, hear.) Dr. Berdoe concluded by remarking that he thought he had shown that experiments of a very cruel and prolonged nature could be performed in England to-day under the Act without penalty or restriction, and that even those experiments which were said not to entail any pain at all did really in a great number of cases introduce diseases which caused the acutest suffering. He had, therefore, great confidence in seconding the resolution which the reverend chairman had read, and in asking them to agree that the practice of vivisection ought not to be tolerated in any Christian country. (Applause.)

Mr. BRYAN said he thought it must be obvious to every one that the various experiments of which the doctor had been speaking were practised, and the question arose, how was it these things went on? They had in this country laws for the protection of animals. That animals had a right to protection was a principle that was recognized far back in the last century; it had been proved by the development of things, by the action of the Legislature, which had been beyond question backed up by the opinion of the people at large. (Hear, hear.) They were met by the argument that these experiments were promoted for the benefit of human beings. Professor Huxley wrote, "we should cast aside the notion that the escape from pain and sorrow is the proper object of life." Surely, then, it could not be a proper object to subject animals to torture in order that we, mankind, the superior animal, might escape pain and suffering. Huxley was not with anti-vivisectors, but if this axiom which he laid down as to the proper object of life were reliable, what justification was there in the argument for the continuance of vivisection? They were sometimes told that they referred only to experiments that were made abroad. It was not often that British vivisectors published so clear and full an account of their experiments as that to which Dr. Berdoe had referred; and they scarcely ever published illustrations of animals, therefore they had to take their pictures from the books of foreigners. But the same experiments went on in England, because the instruments and appliances were made and sold here. The present Act of Parliament, however, which had been enacted to prevent these experiments and this cruelty, was so administered that they could not get to know whether these experiments, as a matter of fact, did go on or not. In brief, the inspectors appointed under this Act were friendly to the vivisectors, and what they specially complained of was the fact that the present system of inspection did not secure compliance with the Act in accordance with the design of the Legislature. Inspection should be effective and far reaching, and that which was called restriction should be restriction in fact. (Applause.) The system now in vogue conducted to secrecy; first, because of the fewness of the Inspectors, only two for Scotland and England, and secondly, because the Inspectors were friendly to the vivisectors, and had no feeling of pity towards the animals which underwent suffering, and did not visit the laboratories sufficiently frequently to be able to expose what was going on. Further, the statistics in the official reports were compiled by the vivisectors themselves. He dared say some people would think he had made a rather sweeping assertion in reference to these Inspectors, but he would inform them that the Chief Inspector was a professor in University

College, London, and the associate of other professors who pursued experiments there. Therefore, they could hardly say that this gentleman was altogether untainted, or that he was independent as between the public and the vivisectors, or as between the animals and the vivisectors. In fact, he was a friend of the vivisectors, and therefore the law was more or less a dead letter. Owing to the forms that had to be gone through by would-be vivisectors there was an influence in the direction of limiting the amount of experimentation going on, but there was still far too much, and the Inspector acted not only as a screen to the vivisector, but also as his advocate. Dr. Berdoe had already told them that very little good had come from the study of bacteria; therefore the enormous increase in experiments and in the suffering of animals had proved of no advantage in preventing disease. One point in the Inspector's report to Parliament was rather alarming, and he (Mr. Bryan) did not think the Inspector could have been quite conscious of the sort of admission he was making. He reported that inoculation was largely used for purposes of diagnosis in man and animals; that not only were animals experimented upon, but if they suspected a human being had a certain disease they injected microbes or serum into him experimentally, in order to make a diagnosis as to whether he had the disease or not. That was absolutely illegitimate. (Applause.) It seemed to him that when a man was ill—when he had morbid matter in his body setting up disease, and making him ill and giving him pain and suffering—the object of the medical man's treatment should be to get that morbid matter out of him as quickly as possible; but instead of that the fashion of the day was to inject a little more morbid matter; some more animal extract—more poison and seeds of disease. It was absolutely absurd to think of such a procedure in a remedial sense, but men were doing it, and they were experimenting on animals by thousands. During the past ten years the number of experiments made had increased from 1,220 to 7,500. Therefore, he thought the time had really come when they should ask the people of England to join with them and express their strong opinion that this sort of thing should be put an end to, that the cruelties of vivisection should be terminated, and that the humane character of the English people, as borne witness to by laws already on the Statute Book, should be vindicated once and for all. (Applause.)

The Rev. H. M. FLETCHER then took advantage of the invitation of the Chairman to address the meeting. He was not an advocate of vivisection; on the contrary, he had a strong conviction that it was wrong, and his object in coming upon the platform was to ask the medical gentleman who had spoken a question, which he had no doubt would be answered to the satisfaction of every one present. Dr. Berdoe had told them that curare paralysed the nerves of motion, but that it had no effect upon the nerves of sensation. What he would like Dr. Berdoe to tell them was how he knew that the nerves of sensation were still acute?

Dr. BERDOE said that curare was first described by Waterton, the naturalist, but Claude Bernard was the scientist who wrote about it at great length, after innumerable experiments, in the French scientific journals, and it was to his researches they were indebted for knowing what they did about curare. Bernard said that curare rendered all movement impossible, but did not render the subject unconscious of pain. Liouville had given a description of a case in which an over-dose of curare had been administered to a human being. Artificial respiration had to be kept up until the patient recovered. The patient felt everything and witnessed all that went on around him without being able to take any part in it. Testimony of a similar description was also to be found in the *Blue Book*.

Mr. BRYAN added, that as the curare paralysed the nerves of motion when it was administered to the animal the action of the organs of respiration would come to a standstill, but vivisectors in order to prolong life carried on respiration by means of pumping air into the lungs through a tube, and in the descriptive list he held in his hand, and which he procured from Cambridge, was an engine for keeping up artificial respiration, and cases had been known in which a man experimenting on an animal over-night had left it on the table with this engine in action moved by a stream of water, in order to keep the animal alive until the morrow. (Shame.)

A MEDICAL STUDENT then ascended the platform and said he wished to deny a statement that had been made by Dr. Berdoe. If the doctor had read last week's *British Medical Journal* he would have seen that there was a denial in reference to the experiments which it had been reported were made on lunatics in Baltimore. He understood Dr. Berdoe to say that Pasteur and Lister had done no good to medical science, but he was glad to know that some people at any rate thought otherwise, and that the British Government had recognized what Lister had rendered to science by giving him a peerage. Pasteur had also done good to science, and if his treatment of rabies was of no use how was it that people flocked to Paris to get treated by him, and that the returns for hydrophobia were considerably lower in percentage than before? Surely, if the treatment of Pasteur were not effectual men would not be so foolish as to go to Paris to get treated. Then, of course, the doctor had brought up that famous case—whenver they went to an anti-vivisection meeting it always came up—in reference to the manner in which animals are dealt with under curare. That was only a solitary instance and must not be taken as typical of the rest. He complained that most of the arguments brought forward at these meetings consisted of quotations from books, which were not always reliable. Dr. Berdoe said two inspectors was an inadequate number, but they could not have an inspector for each person who had a certificate. Reference had also been made to the tremendous increase in vivisection, and in the number of experiments made during the past year as compared with ten years ago. He thought this was a strong argument in favour of vivisection. Dr. Berdoe also stated with regard to curare, that while animals could not move they might feel pain. As they were not lower animals it was impossible to say whether they felt pain or not, and as the doctor had said in reference to the guinea pig, that which applied to an animal did not apply to man. Therefore, upon his own admission, he did not see that there was any direct proof that animals felt pain while under the influence of curare. It was further stated that five thousand animals were used last year for purposes of experimentation, but what, he would like to ask, was this compared to the number of cattle killed daily to gratify the human race, and this without chloroform or anything whatever. (Laughter.)

Dr. BERDOE remarked that the last speaker had asked why he did not read the *British Medical Journal* of last week, but the letter to which his friend alluded was written by himself. (Laughter.) It was his answer to Dr. Berkley, and the *Journal*, in inserting the letter, intimated that the correspondence must now close. He had been asked why people went to Pasteur in such large numbers to be inoculated? The year before last he went over to Pasteur's laboratory himself, and witnessed inoculations, and talking to some of the people who were waiting to be inoculated, he ascertained from several patients that they went to see Paris for the fun of the thing, and he concluded that many of them treated this thing as a good joke. During the whole of his experience he had never seen more than two cases of hydrophobia, and there were many medical men who had never seen one. They had been informed that the death-rate had been enormously reduced as the result of Pasteur's treatment. It certainly had not been reduced in Paris, and he challenged his friend to name any country where the death rate from hydrophobia had been reduced since Pasteur began his experiments; indeed, he said before the medical profession of the world that he believed it was greater quackery than Mother Seigel's Syrup. (Laughter.)

Replying to certain points which had been erroneously attributed to Dr. Berdoe, Mr. BRYAN said it was quite true they did not require an inspector for each person certificated, but what they did want was efficient inspection. (Hear, hear.) The so-called Restriction Act was all but a dead letter. With regard to the increase of vivisection, Parliament did not intend to allow things that now went on, when it passed the Act twenty years ago. That Act was to be administered by the Home Secretary, who put himself in the hands of an association of vivisectors, who practically had the administration of the law. It was not Parliament that permitted vivisection. They were trying to convince Parliament that there ought to be a great deal less of it, and they were succeeding to a large extent. (Applause.) Again, there was all the difference in the world between slaying animals quickly for the benefit of

mankind, and slowly torturing them for hours, days, and weeks. They had no objection to killing animals for food.

Mr. BEAUMONT, another medical student, said he understood the last speaker to say that these experiments were carried on at Oxford. Personally he had never seen such a thing except under complete anæsthesia. He disagreed with Professor Huxley that escape from pain and suffering was not the proper object of life, and thought they should do all they could to alleviate the sufferings of mankind.

Dr. BERDOE: But not always to escape it ourselves? Where would self-sacrifice be?

Mr. BEAUMONT: I hold that escape from suffering is one of the objects of life, and that is why we are vivisectors.

Mr. BRYAN said the gentleman who had just left the platform would make a very good inspector, for he would then report that he did not see anything objectionable going on. For the benefit of Mr. Beaumont he might mention that, according to the returns, experiments were performed by medical men in Oxford who had certificates, and that they were made without the use of anæsthetics. Therefore, although Mr. Beaumont had not seen them, he now knew that his information was incorrect. (Laughter.)

The resolution was then put and carried with only three dissentients, and the meeting terminated with a cordial vote of thanks to Canon Christopher for presiding.

OUR CAUSE IN THE PRESS.

A VIVISECTOR'S CONFESSION TO FATAL EXPERIMENTS ON MANKIND.

The following important letter was published in the *London Star*, and *Echo*, and also noticed in a leaderette in the *Daily Chronicle*, about the end of October:—

SIR,—The intimate association between the vivisector's laboratory and the sick bed has often been exposed in your columns, but the use of a quarantine station for the purpose of scientific murder is something new and startling even in these days of surprises.

You recently announced that Professor Sanarelli had claimed to have discovered the bacillus of yellow fever. The *British Medical Journal* has explained his method of experimenting on animals with germs of this terrible disease. These experiments entailed the greatest suffering and misery upon the horses, dogs, and other victims of the research, but we were given to understand that it awaited "further development" before the inevitable protective serum or antitoxin could be discovered for clinical use. That development has taken place.

The *Boston Evening Transcript* of 25th September contains a long and careful exposition of Professor Sanarelli's researches on animals and human beings inoculated with the germs of yellow fever. Here are Sanarelli's own words, explaining the experiments he carried out on *healthy human beings* at the quarantine station on the Island of Flores, near Monte Video. He says:—

"My experiments on man reached the number of five. In two of the individuals I tried the effect of subcutaneous injections of the germ culture, and in the other three that of intravenous injections. . . . The injections of the filtered culture in doses relatively small reproduces in man typical yellow fever. The fever, the congestion, the hemorrhage, the vomit, the fatty degeneration of the liver, the headache, the backache, the inflammation of the kidneys, the jaundice, the delirium, the final collapse—in fine, all that conjunction of symptoms which constitutes the basis of the diagnosis of yellow fever—I have seen unrolled before my eyes, thanks to the potent influence of the yellow fever poison made in my laboratory."

It is to be noted that the five victims of the experimenter were *healthy human subjects*; that the inoculation condemned them to all but certain death; that, in fact, they all perished miserably after horrible sufferings in "final collapse." There was no pretence of cure, for in healthy subjects there could be nothing to treat. It was simple, deliberate murder, undertaken to gratify scientific curiosity on the "lowest orders of the

people, where no law stepped in to stay the hand of the bold experimenter," as the reporter of the *Transcript* puts it.

This is what we are coming to—this is what we must expect from the establishment of bacteriological institutes in our midst.—Yours, etc.,

EDWARD BERDOE.

October 26.

EXPERIMENTS ON LUNATICS.

This is another case of experimentation on human beings. Dr. Berdoe having published extracts from the *Bulletin of the Johns Hopkins Hospital*, Baltimore, U.S.A., in which a Dr. Berkley recorded experimental poisoning of lunatics with thyroid gland, that gentleman sent an exculpatory statement which was published in the form of a letter in the *British Medical Journal*. The salient points of Dr. Berkley's defence will be gathered from the following rejoinder of Dr. Berdoe, published as a letter to the Editor in the *British Medical Journal* of November 6th:—

"Sir,—If I have done Dr. Berkley any injustice by my strictures upon his article entitled, 'Poisoning with Preparations of the Thyroid Gland,' no one could regret it more profoundly than myself. Every precaution was taken by me to ensure accuracy in my criticisms. I sent to Baltimore for half a dozen copies of the *Bulletin*, and not only submitted the paper to the examination of the medical men, but took the opinion of an eminent counsel and of several able editors of daily journals as to the interpretation which could be put on Dr. Berkley's statements. Without exception every person I consulted agreed with me that Dr. Berkley had experimented upon lunatics with a dangerous poison, and had openly confessed the fact. His paper is entitled 'Poisoning with Preparations of the Thyroid Gland;' the dictionaries tell us that 'a poison is any substance which when introduced into the animal organism is capable of producing a morbid, noxious, or deadly effect upon it.' Dr. Berkley goes on to tell us that it was 'directly for the purpose of ascertaining the toxicity of one of the best known varieties of the thyroid extract that the following series of experiments was undertaken.' Surely never were more damaging words strung together if the writer had no intention to poison his patients. Dr. Berkley says his object was to 'give them another chance to recover their reason.' I am bound to believe him, but we do not usually treat our patients with drugs to ascertain their toxicity! Throughout the paper the writer refers to the treatment as 'experiments.'

"Whether of lunatics in the asylum, or thyroid mice and thyroid guinea-pigs and dogs, the whole paper is the story of experiments in poisoning; that is to say, to the unsophisticated reader. If, as I am bound to believe on Dr. Berkley's word, it is on the other hand the clinical history of certain patients whom he did his best to cure, then the writer should never more attempt to write on such matters.

"In so many words, we are told that the 'experiment' demonstrates that the administration of the poisonous agent 'is not unattended by danger to the health and life of the patient,' and in the next paragraph we read, 'These results obtained, we then decided to further pursue our experiments upon the lower animals, to determine the amount necessary per kilo. of weight to cause death,' etc. If my strictures were 'unwarranted,' Dr. Berkley has only himself to blame for a wording which he admits was 'unfortunate,' but which I maintain was positively incriminating.—I am, etc.,

EDWARD BERDOE.

"Victoria Park, E."

TETANUS AND DRUGS.

(FROM THE "DEVON AND EXETER DAILY GAZETTE,"
NOVEMBER 16TH.)

SIR,—Your correspondent, W. Theobald, recently asked in your columns why the medical profession in England "boycott" *Cannabis Indica*, or Indian hemp, the one drug which he considers is alone capable of controlling traumatic tetanus.

Cannabis is not in the least boycotted by my profession. It is very largely used in the treatment of disease, although in England its employment in tetanus has not been encouraging. Still, it is recommended in all books on therapeutics. In India it has been most successfully employed by causing the patient to smoke the drug almost continuously. It is probable that climatic and other conditions may render its use more beneficial in India than in this country.

The drug curare which antagonises the tetanus of strychnine poisoning suggested itself as likely to be useful in traumatic tetanus, but it has not fulfilled its promise. And this illustrates the fact that the physiological action of a drug as determined in the laboratory is a very unsafe guide to the therapeutic action of the medicine. Judging from the physiological action of curare, it was the ideal antidote to tetanus, but it failed in practice.

A familiar example of the vagaries of physiological remedies is the well-known medicine antipyrin. As its name indicates, it was introduced into medicine to lower temperature in fever cases. But it has been little used for this purpose, although clinically it has been discovered to have very valuable properties for relieving pain. It is largely used in neuralgia, for example. It was not the laboratory experiments which suggested this valuable property, but its use in the treatment of human patients.

I do not believe in tetanus antitoxin as suggested by Cattani and Tizzoni. In acute cases due to injury the antitoxin has been useless, although in certain mild cases, which would probably have got well without any special treatment, it has had the credit of effecting a cure.—I am, Sir, yours truly,

EDWARD BERDOE, M.R.C.S., etc.,

London, November 13th.

Obituary.

THE REV. SAMUEL HAUGHTON, M.D., D.D.,
F.R.S.

The death of this remarkable man, which took place at his residence, Northbrook Road, Dublin, at the age of seventy-five, was announced early in November. By his death Trinity College, Dublin, lost one of her most distinguished sons and teachers. He graduated in 1844, taking Senior Mathematical Moderatorship and Gold Medal, and in the same year took his Fellowship at the age of twenty-two on the first trial, a performance almost unique in the history of the University. From time to time he examined in Mathematics, Ethics, and Logic, Experimental Physics, etc., and filled all the University offices; he was also member of the Senate, and member of the University Council, to which he was elected by the Senior Fellows. In 1851 he was appointed to the chair of Geology. Two years after taking his Fellowship he entered Holy Orders, and on becoming priest in 1847 was appointed an Assistant Divinity Lecturer. In 1881 he was elected a Senior Fellow and member of the Board. Turning his attention to the faculty of Medicine he took the degrees of M.B. and M.D. in 1862. He is, perhaps, most widely known in the United Kingdom as an author. The late Dr. Haughton was also member of most of the learned societies. In 1858 he was elected Fellow of the Royal Society, in 1868 Oxford honoured him with the honorary D.C.L., in 1880 Cambridge, and in 1884 Edinburgh conferred on him the honorary degree of LL.D. He was also elected Fellow of the Royal Colleges of Surgeons and Physicians in Ireland, Fellow of the Swedish Society of Physicians, and, in 1888, he was made an honorary M.D. by Bologna University. He was a most forcible and bright speaker, with a keen sense of

humour, and in all his social relations his genial and kindly nature endeared him to all classes of men.

The *Lancet* (November 6th) wrote of him as follows:—"Among intellectual Irishmen few were more prominent and typical than Professor Haughton, M.D. Dub., D.D. He was encyclopædic in his knowledge and his conceptions of knowledge. Divinity, mathematics, mechanics, physics, physiology, languages, medicine, all seemed alike easy to him. But it was in his nature and disposition that his chief charm lay. His geniality and humour were constant and sometimes irrepressible, even when subjects of grave moment were under discussion. He was a very familiar and distinguished figure in the General Medical Council on which for a great many years he represented Trinity College, Dublin. On questions of education, especially general education, he spoke with an authority to which no other member could pretend. But on essentially medical subjects, such as midwifery and infectious diseases, he spoke well and was always on the practical side, as one representing a country the social condition of which made medical help at once difficult to get and essential to have. Professor Haughton was for years on the Education Committee of the Council, and in this capacity he did great service. Proud of the great College of which he was so distinguished a representative, and ready as he was to fight for her whenever anything was said which seemed to conflict with her interests or her honour, he yet concerned himself with all the ordinary questions which engaged the attention of the Council both in its educational and its ethical work. And so it happened that when failing health compelled his reluctant resignation the members felt an unusual personal sense of loss and regret and that one would be missing from their midst who imparted to their discussions interest and wit and learning of quite an exceptional kind."

The *British Medical Journal* terminated a long notice of Dr. Haughton's career by quoting the well-known lines:—

"He was a man—
Take him for all in all—
We shall not look upon his like again."

This was the Dr. Haughton who gave evidence before the Royal Commission of 1875, and who, though not an anti-vivisectionist, strongly objected to teaching by experiments on living animals and made the well-remembered striking statement in these words:—"I would shrink with horror from accustoming classes of young men to the sight of animals under vivisection. I believe that many of them would become cruel and hardened, and would go away and repeat these experiments recklessly without foresight or forethought; science would gain nothing, and the world would have let loose upon it a set of young devils."—*Evid. Roy. Com.* (London, 1876), Q. 1888.

MRS. DAVIS, OF EDINBURGH.

During the past month, the Scottish Society has lost one of its warmest supporters by the death of Mrs. Davis, wife of Dr. Davis, both of whom had long taken an active interest in the work of the Society, having for many years been members of its Executive. The directors at their meeting unanimously passed the following resolution which has been forwarded to Dr. Davis:—"The Committee received with much regret the announcement of the death of Mrs. Davis, a warm friend and devoted worker, who was always ready to uphold and extend the anti-vivisection cause, and advanced its interests in quiet but effective ways. The Committee deeply sympathize with Dr. Davis in his sad bereavement."

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, WEDNESDAY, DECEMBER 1st, 1897.

THOSE DISHONOURD BILLS.

Dr. WATSON CHEYNE, in his address on the "Progress and Results of Pathological Work" at the British Medical Association meeting in Montreal, referred to Anti-vivisectionists as "deluded people who oppose the use of intelligence and observation and experiment." He said:—

"It is greatly the fashion with the opponents of experimental research to demand a single instance in which an experiment has led to the discovery of a means of cure."

We deny that we are deluded, and we protest that we have nothing but the greatest anxiety that intelligence and observation should be employed to improve the art of medicine; it is sadly in need of both, but we think that cruel experiments are not likely to serve this purpose. We do demand, and shall continue to press for, information of a single instance in which vivisectional experiments have wrought the cure of any disease. Dr. CHEYNE's wise reticence in the matter serves but to confirm us in our unbelief. As one of the most prominent English vivisectioners, whose pathological experiments have been sufficiently cruel and prolonged, we had every reason to expect that if any beneficial discoveries had resulted from his researches he would have been only too ready to explain them. But what is the reply which he vouchsafes to our demand? Does he cover us with confusion by exposing our ignorance of medical history, by pointing to a list of diseases banished from our midst in consequence of animal experimentation? We ask no awkward questions about cures for insanity, cancer, leprosy, or suchlike terrible maladies. We would be content with a rapid cure for a common cold, a ready method of treating sciatica or neuralgia, a specific for toothache or bunions even. Dr. CHEYNE cannot even adduce such a boon as this. We are rebuked for demanding anything of the kind.

OLIVER TWIST horrified the beadle by asking for more, we have had *nothing* as yet, but Dr. CHEYNE is

disgusted at our importunity all the same. He tells us, "in no department of science has a single experiment of itself alone led to the practical result; the final observation which led to the practical result has been built upon numerous and laborious preliminary investigations and observations." Dr. CHEYNE has misrepresented us, we never expected that a single experiment by itself would lead to a discovery of a cure for disease. We have said nothing about "*a single experiment*," we ask for proof that *a single disease* has been banished by experimentation on animals. A very different thing. The orchestra has been a long time tuning up; horrible cacophony has assaulted our ears; we want to know when the harmony is to begin. There is a legend of an Eastern potentate who enjoyed the tuning of the instruments better than the opera which followed. We are sick of the discords of the physiological laboratory, we ask for a little melody, ever so little harmony, and Dr. CHEYNE bids us be quiet while he and his fellows blaze out their discords. The opera is always to begin, but never does. Yet it is suggested that diphtheria, consumption, and anthrax have all been exorcised by experiment, and if they have not departed so much the worse for them; the incantation was good! Tetanus, we are told, ought to be cured by antitoxin, but, unhappily, "the illness runs its course before the serum has had time to act." Oh, most sapient Doctor CHEYNE, do not all patients who die expire before their doctor's remedies have time to cure them?

But hear the oracle of Montreal again:—

"The same may also be the case with the anti-streptococine serum, although I have great doubts of its value as a curative agent."

So have we, but it is pleasant to doubt in such good company. "In other instances," continues the experimenter, "such as plague and snakebite we may apparently look forward to a cure." Why, certainly; some day we may. *Prospice* is a good motto for anybody, but is not satisfying beyond a certain point. Other researches are referred to, "which may lead to valuable results." They may. Wings may sprout from the shoulders of the hippopotamus, but an ærial flight of such creatures is not a likely spectacle. Now, while all these things are, unlike the hippopotamus, *in nubibus*, Englishmen are urged "to furnish the means for such research." Dr. CHEYNE says "England is almost the only country which does not realize the importance of scientific research," and so he complains that researchers are compelled to practice as doctors for a living when they ought to be researching in the laboratory. This is distressing, especially as the doctor declares that the self-sacrificing "pathologists are working out problems which affect the general well-being of mankind, and the solution of which can be of no personal gain to themselves." They would so much prefer to stand in the laboratory, rather than take less fees for feeling pulses and looking at tongues outside, "only one must live." Not that there is any necessity for that in every case, as TALLEYRAND said.

THE MORALITY OR IMMORALITY OF OUR CAUSE.

OUR contemporary, *Science Siftings*, on November 6th, published an article headed "The Immorality of the Anti-vivisection Movement." We have often heard this movement jeered at as sentimental, its supporters as weak and addicted to exaggeration and falsehood, but the idea that the movement is immoral was new to us. We took up the article with some curiosity, but after perusal laid it down without having found any argument to shake our previous belief that the immorality is all on the side of our opponents.

The article begins by praising compassion—"the main jewel in the crowns of the greatest religious leaders in the world," but adds that "compassion is a *sentiment* and he who yields to sentiments without subjecting their exercise to criticism and discrimination ceases to be a man of moral responsibility, and degenerates into a creature of instinct." Have we then been wrong all our lives in regarding the GOOD SAMARITAN as worthy of admiration? Was he, after all, immoral in yielding to his impulse of compassion? If so, we should prefer to be immoral in such company rather than moral in company with the vivisectors.

The article proceeds to argue that suffering is unavoidable—possibly so, but we need not on that account inflict it;—and that much mischief is sometimes done by well-meaning people, as for instance those who bestow indiscriminate charity. This we will grant, because some of the recipients might remove the poverty from which they suffer by honest work, and are encouraged in vice by the charity they receive; but the animals whom we seek to save from vivisection, are not unworthy of our pity, and are not likely to be demoralized by our help. They cannot help themselves, and bear no resemblance to the able-bodied pauper, who prefers begging to working. We are told that "The Inquisition," the Spanish we presume, was begotten by a great zeal for truth; but we have a suspicion that the desire for ecclesiastical power, and greed for confiscated estates were its real parents, just as, in our opinion, lust for fame, and a prospect of pecuniary advantage are the parents of modern vivisection.

The comparison drawn by the writer of the article between the vivisected animal and the soldier sacrificed by his General on the field of battle in order to gain some advantage over the enemy, is not more happy, for the soldier in theory always, in practice often, is filled with the spirit of patriotism, and is willing to die for his country; at any rate he has enlisted of his own free will, ready to take his chance of wounds or death should war break out. The vivisected animal, on the contrary, is not dying for the advantage of its race, is not in any sense a willing victim, but is a captive put to death by slow torture for the real or supposed benefit of his captor.

"Vivisection we all know," the article goes on to say, "is not a pleasant duty for the physiologist, but is an indispensable task that must be done for the sake of

investigation." This is exactly what we do *not* know; we suspect that vivisection gives to many of its professors the keenest pleasure. CYON at any-rate, who ought to know, speaks of the "joyful excitement," and "delight," with which the true vivisector approaches a difficult experiment. The famous vivisectors, according to *Science Siftings*, are tender-hearted men, who, for the great benefit of humanity, at much personal pain to themselves, perform disagreeable duties, and who "feel it painful to be reminded that their subject is a living being." Some of the lesser lights, it allows, may be indifferent to the pain inflicted; among them then we must reckon CYON quoted above, and CLAUDE BERNARD, who said that "the vivisector does not hear the animal's cry of pain, and is blind to the blood that flows." The indifference of the vivisector to the pain he inflicts is testified to by Dr. EMMANUEL KLEIN, who, when he was giving evidence before the Royal Commission, first admitted that he personally disregarded the sufferings of his victims, and went on to say that this was the usual feeling on the Continent, and when asked whether a different feeling did not prevail in England, answered "not among physiologists."

The writer of the article we are discussing falls into the common error of imagining that innumerable discoveries have been made by vivisection. We confess we should be glad to have a list of a few of these discoveries, as at present we have seen claims of only a few trivial ones, and of others, which though of a more important nature were, or might have been made, by other means. We need not trouble the compiler to search for examples of early date, for we know that up to a recent time, none had been made, on the testimony of a man who knew, if any one did, all about vivisection—no less a person than CLAUDE BERNARD, who, as is well known, shortly before his death asserted "our hands are empty of results."

The anti-vivisection movement might be excusable according to *Science Siftings* if there were any valid arguments to prove that vivisection is useless. We reply that the causing of pain is wrong unless it can be proved that it is absolutely necessary, and this has never yet been done in the matter of vivisection. We are further told that if the life of a child attacked by diphtheria can be saved by killing a million rabbits, the slaughter of these would be justified, but this proposition is not one that can be admitted as self-evident.

Vivisection, we are finally told, is a moral obligation, and he who tries to throw obstacles in the way of physiological research is guilty of immoral conduct. We have no desire to hinder the physiologists in their experiments, provided always they try them on themselves, and on one another. We shall, when they do this, look on them as honest, self-sacrificing men, martyrs in the cause of science; we do not, indeed, call upon them thus to sacrifice themselves, but as long as they continue simply to sacrifice helpless animals we think the less said by themselves and their ill-informed eulogists about their noble conduct and the purity of their motives the better.

AGNOSTICISM IN MEDICINE.

PRINCE ALBERT once defined science as "the knowledge of what we know—the consciousness of human knowledge." Let us test the question whether Medicine is a Science or an Art by this definition, and we shall be compelled to confess that according to the views of the hierarchy of the healing art, Medicine is certainly very far indeed from being a Science. Professor CHARLES RICHET, the successor of CLAUDE BERNARD, and a notorious vivisector, was a delegate of the French Government and of the Faculty of Medicine of Paris to the meeting of the British Medical Association which took place this autumn at Montreal. The PROFESSOR delivered an address on the "Modern Conception of Medicine and the Work of Pasteur," in which he made a most remarkable statement about medicine. He said—"In ten years medicine has been entirely overturned and re-made. It is being re-made every day." That is to say, there is a science of medicine to-day, there was none yesterday, and to-morrow the science of to-day will be exploded. What a reflection for patients! They may trust the physician of the moment, though their confidence must be rather shaken by the knowledge that their medical adviser of yesterday was an ignoramus, and whatever knowledge he may possess to-day will be proved to be foolishness the following morning.

There can be no science in all this. Science formulates for us the law of gravitation. We know what we know; to-morrow cannot upset the knowledge. No astronomer, engineer, chemist, or mathematician, talks of Science being re-made every day; it is only dabblers in medicine, quack bacteriologists, and serum manufacturers who talk like this. And what have they to do with medicine when all is said and done? Has the healing art no ancestry? Did HIPPOCRATES and GALEN teach the world nothing that has persisted? Is the teaching of PAULUS ÆGINETA, the work of AVICENNA, ALBUCASIS, AVENZOAR, and AVERROES entirely overturned, and buried beneath the dust of the ages? Not so. These men had never seen a microbe, nor did they know the deadly properties of an antitoxin or a prophylactic serum, but they could cure wounds, relieve pain, and restore to health pretty much as we do now. HERODOTUS said of the Babylonians—"They have no physicians, but when a man is ill they lay him in the public square, and the passers-by come up to him, and if they have ever had his disease themselves they give him advice." Probably his sympathizers did not differ amongst themselves as to diagnosis and treatment to any greater extent than would an equal number of Harley Street physicians to-day on any given case involving much difficulty.

"The idea of the microbe," said Professor RICHET, "has become the basis of medicine." It has—to the bacteriological enthusiast and the serum quacks, but by no means to the true physician. The microbe hunter sees everything through the lenses of his microscope; he ignores the vast field of disease which cannot be brought within the focus of his instrument. Medicine, anyhow, cannot all be the study of parasitism.

The *Pharmacopœia* still maintains its armoury of weapons against a host of diseases for which the serum-mongers cannot even suggest a remedy. Quinine will never give place to a filthy inoculation of morbid animal matter, and opium, God's best gift to the doctor, will never be supplanted by an antitoxin. It is probable that if Professor RICHET were suffering from any disease not definitely zymotic he would be treated by his physicians pretty much as he would have been doctored twenty or thirty years ago. Even the diseases claimed by the serum-quacks as their special field are very few. Scarlet fever, measles, pneumonia, acute rheumatism, and ague, are treated on much the same lines as were followed twenty years back. The doctor who looked to the bacteriologist only to furnish him with weapons wherewith to combat disease would find himself reduced to a few tubes of more or less deadly serum and an inoculation syringe.

Dr. LAUDER BRUNTON is a vivisector, an enthusiastic experimenter upon animals, but he is also a physician. He has just published a large book on the *Action of Medicines*. So far, however, from saying that in ten years medicine has been entirely overturned and re-made, both his remedies and his mode of treatment are in ninety per cent. of the cases those in common use when QUEEN VICTORIA ascended the throne. The theory of medicine has changed, is always changing in the ultra-scientific mind of the novelty-hunting specialist, but the practice of medicine as a whole has been but little affected by the laboratory experiments of the researchers, who make up in loud advertisement what they lack in skill in dealing with the ills which flesh is heir to. Clinical medicine rests on a basis of real and assured knowledge, and it is only the Medical Agnostic who fails to benefit his patient by his art. The researchers merely turn their kaleidoscope, and with every change of pattern exhibited proclaim a new theory of medicine which the slightest vibration of the instrument must certainly overturn. But watching the phenomena of disease in a medical kaleidoscope, though an amusing operation for the theorist, is not of much value to the patients who ask to be cured. Happily for them there are plenty of doctors who know what they know, and are confident that to-morrow's sun will not dissipate their knowledge like the fogs and vapours of the experimenters' laboratories.

DIPHTHERIA IN LONDON.—The amount of diphtheria recorded in London during the four-weekly period ended on August 14th—namely, 1111 notified cases, which fell during the succeeding four weeks ended on September 11th to 866 notified cases, has been exceeded by the returns for the like period ended on October 9th when 1169 cases were notified. Whilst the weekly average of the September period was 216 cases, the average in the October period was 292; and all the sanitary districts save one were invaded, three having been free in the September period. Also, whilst four districts in the September period had upwards of 50 cases each, and an aggregate of 246, there were seven such districts in the later period, with a total of 469 attacks. As a set-off against this there were other five districts with only 17 notified cases amongst them. The 117 deaths (29 weekly) in September rose to 182 (45 weekly), in the later period, the respective case-mortality rates being 13·5 and 15·6 per cent.—*Lancet*, Nov. 6th.

CORRESPONDENCE.

"BROKEN THREADS."

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Your courteous reference to "Broken Threads" demands my acknowledgments, and therewith an explanation. I find that it has been assumed, because I have invaded the domain of psychology, that therefore my intention is to attack the Medical Superintendents of Asylums. Nothing of the kind. My acquaintance with this particular class cannot be termed extensive, but so far as my limited experience goes, I am able to render it ample justice. I am not acquainted with a vivisectioning mad-doctor. The ablest man of the profession whom I have met, spoke of vivisection in faltering tones, and his own devotion to duty, sympathy with suffering, and sensibility of character led me to believe that he would have denounced the accursed thing, but for a mistaken sense of *esprit de corps*. At the same time, now that the rising generation of medical men is being demoralized and dehumanized by the prurience of torture, one cannot but feel apprehensive of what may happen next. Within the walls of an asylum the writ of *habeas corpus* does not run. So far as supervision goes, the Lunacy Commissioners amount to a costly farce. The Asylum Committees endeavour to keep a firm grip on the management of these institutions, and practise such economies as satisfy the ratepayers. Otherwise the head is absolute. He engages and discharges his attendants. The officers under him are given to understand that unless they can contrive to meet his ideas they must go. No autocrat is so despotic, and if thus far the despotism—except perhaps with rare exceptions beyond my ken—has been benevolent, still it is absolute and almost irresponsible. To show how much it may become a tyranny, I have but to cite the case of the Chaplain to the Devon Asylum some years ago. This gentleman's wife, actuated by motives of humanity which did her the highest honour, supplemented her husband's work by visiting the female patients. The Head objected, and his Committee, with contemptible subservience, gave the chaplain to understand that he must either submit to the superintendent's ukase or go. That may be an extreme case, but it illustrates the omnipotence of the Head, not only over the uneducated attendants, but over his officers also. Under such a system all may go well provided the autocrat has a conscience. I will go further and affirm that in the main all does go well because asylum superintendents are, so far as I know, men of earnest purpose, actuated by the highest feelings of humanity. But you don't tell me that an experimental physiologist has a conscience; or if you do, simply, I don't believe that *a* and not *A* are the same term. There lies the danger. If researchers are to be imported into our asylum system, armed with plenary powers, then woe be to the poor patients. At present I am not aware of a single medical superintendent being a vivisector; but if I do hear of such a moral monster being given a free hand with lunatics, I shall consider that the time has come when the question must be faced: *Quis custodiet ipsos custodes?*

COMPTON READE.

Kenchester, Hereford,
November 3rd, 1897.

CATHOLICISM AND VIVISECTION.

TO THE EDITOR OF THE "ZOOPHILIST."

SIR,—Is it not time that those members of the Catholic Church who abhor vivisection (and beyond doubt there are many such) should make their voices heard more distinctly? In the *Animal World* for November a Catholic correspondent protests against the assumption that Catholics generally share the views of Monsignor John S. Vaughan, who, in his devotional book entitled *Thoughts for all Times*, has lately published an essay on "Theology and Vivisection," in which he warmly supports the practice of experimental torture. That there is a vital difference of feeling among Catholics on this point is shown by the position of Cardinal Manning, as contrasted with that of Monsignor Vaughan. The Church, says the Monsignor, while denouncing the

abuse, "sanctions the use" of vivisection. "There is not to be found," said Cardinal Manning, in 1882, "a word in the great theology which I represent, no, nor in any act of the Church of which I am a member, no, nor in the lives and utterances of any one of those great servants of that Church who stand as examples, nor is there an authoritative utterance anywhere, in favour of vivisection. There may be the chatter, the prating, and the talk of those who know nothing about it." On a previous occasion, in 1881, the Cardinal denounced vivisection as "a detestable practice, without scientific result, and immoral in itself."

One would think this was pretty plain speaking, yet we find the *Catholic Herald* (October 29th), in its support of Monsignor Vaughan, insisting that "Catholic theology on the matter is quite clear, and however Catholics may differ as to the utility or advisability of vivisection, there is no difference of opinion as to the thing itself," and fatuously questioning whether Cardinal Manning condemned vivisection as immoral!

The truth is that the Catholic apologists for vivisection have not taken the trouble to study the case of their opponents, and therefore talk nonsense, as clever men often do when they get on unfamiliar ground. Monsignor Vaughan "is doubtless an expert theologian," says Mr. H. S. Salt, in a criticism, reprinted from the *Vegetarian Review*, in which he mercilessly exposes the Monsignor's fallacies, "but as a controversialist in humanitarian problems, he is a very inefficient tyro indeed." It must be painful to human and clear-minded Catholics, to see their religion thus associated with the defence of the most barbarous practices by the use of the most absurd arguments.—I am, yours faithfully,

JOSEPH COLLINSON.

53, Chancery Lane, London,
November 11th.

NEW BOOKS, REPORTS, ETC.

Fidelis and other Poems. By C. M. Gemmer. Westminster: Archibald Constable & Co.

The author of these poems, so sweet, melodious, and meritorious, has kept them from the world too long. We do not wonder that they won the approval of Browning and Matthew Arnold, for neither—nor any one else, we imagine—could fail quickly to discern that they have the true poetic ring, combined with a good command of chaste and pleasing language, and as their source a lively and productive imagination. "*Fidelis*" is the story of a favourite dog, who was loved and lost, and forms what may be termed a graphic picture of canine gambols and companionship. There are many who have the gift of rhyming, but few who, like the author of this book, can write true poetry.

"Deep eloquence of creatures that are dumb,
Of gracious animal existences!"

is exquisite in conception and expression. The following admirable apostrophe gives a fuller idea of the author's style and capabilities:—

"Rest, truer heart hath never felt a pain,
Eyes, jewel dark, where sense and feeling glow,
Gay, golden ears, more restless than a vane
In summer's fitful airs that come and go;
Swift feet, whose music pattering to and fro,
Ran through the dull old house like fresh-caught fire;
Shrill welcomings, and quaint attacks of ire,
Dissolving, like the frost before the sun,
In fawnings meek, and fondlings of the tongue,
And notes, more plaintive sweet were never wrung
From nightingale, between the weeping grey
Of moonless heavens, inquiring of the May,—
For ever hushed! the pleasant game is played
Half-mirthful, half-pathetic—in the shade
Of these dun boughs content thee, little one."

We learn with pleasure that a copy of the book having been sent to the Editor of the *Scotsman* a review appeared in that important journal in which it was stated that "They (the poems) have all a certain charm born of sincerity and tenderness of feeling. A devoted lover of poetry will not fail to admire them." A judgment we can fully endorse.

John Hunter, Man of Science and Surgeon (1728-1793.) By Stephen Paget, with Introduction by Sir James Paget. London: T. Fisher Unwin, Paternoster Square, 1897.

This is one of a series of books dealing with the most prominent representatives of medicine in the various ages.

"John Hunter," we learn, "was born on February 13th, 1728, the last of ten children" (his father then being an old man), though he always celebrated his birthday on St. Valentine's Day. He lived through the greater part of that terrible half of the last century, the "Age of Terror" in France, the sound of whose Revolution was ever coming in gusts across the Channel, and died of *angina pectoris*, a disease of the heart, "on the same day, and perhaps hour, that the unfortunate Marie Antoinette, Queen of France, was beheaded in Paris, October 16th, 1793;" and though he was only sixty-five, he had probably put more work into those years than most men do into three life-times.

Previous to coming to London his life was uneventful, and having neglected his education and other opportunities, it is startling to find him in so short a time sharing the laurels of anatomical pre-eminence with his brother, Dr. William Hunter. In character he was veritably a lion in honesty, boldness, assiduity, good nature, indefatigable energy, and dauntless courage; and his self-sacrificing devotion to his work and mankind give his character the high water mark and class him amongst the foremost makers of medical history. Not that in justice we can declare him perfect, but perhaps we may say his virtues he brought with him, but his vices he found already here. All that a crass, material age and a land of prejudice, spite, and jealousy could do, was done to mar his course. As a hero he had to run the gauntlet like his forerunners—to be hated and killed, and then worshipped on the altar of their ashes. John Hunter was such a victim, and his accusers were those who stood round him in his own profession, who were jealous of his abilities and hard work, his originality and popularity, and who especially could not tolerate his success. He was greater than his profession, such as it was in those days. Like all great men he walked over conventionality and custom, which most men stoop to worship and are slaves to. He recognized no etiquette (if it existed in those days) that prevented him from consulting with unprofessional quacks (so-called). His cry was for humanity and progress in medicine, which was in its very infancy. He was ever candid to a fault, as is shown by the following:—Dr. Garthston, an obsequiously courteous old doctor, who was in the habit of visiting him, one morning said, "My dea-a-r John Hunter," and was answered, "My dea-a-r Tom Fool." Nor did he spare himself, for when Astley Cooper pointed out that on a previous occasion he had said something which was quite at variance with his (then) present statement, he said, "Very likely I did. I hope I grow wiser every year;" and on another occasion, "Never ask me what I have said or what I have written, but if you will ask me what my present opinions are I will tell you." There are hints in the book that point to the potential philosopher (had he lived in another age). In this respect his fine remarks on consciousness, though referred to as "abuse of words," nearly agree with the views of Dr. Clelland, a great living anatomist, *i.e.* that consciousness is vested in all the tissues, and not in the brain alone. John was a great contrast to his brother William, for while William was delicate and gentlemanly in appearance and manner, susceptible of affront and jealous of his reputation, John was of a coarser and stronger physique, blunt in manner, careless of his health and reputation, dauntless where principle was involved, thriftless, but, indeed, generous. Much has been said about his experiments on animals, and many have attempted to bolster up vivisection in his name. Doubtless he kept hundreds of animals alive, and dissected thousands dead; but for the claim for celebrity for his vivisections, Dr. Stephen Paget shows his good sense in giving them their proper value by practically ignoring them. Experiments are mentioned over and over again, but there is nothing to show their being of the extreme character we are unfortunately forced to associate with vivisection to-day; in fact, for the most part, they might be of the character of painless observation on the living, connected with temperature, habits, and digestion. There is,

moreover, no hint that vivisection played any important part in his great operation for aneurism, and every reason to infer that *post mortem* and anatomical researches, plus natural deductions, were the sole means that led him to his conclusions. Moreover, everything points to Hunter being of a humane character, as was proved by the lively interest he took in the foundation of "The Humane Society." Hunter, to a great extent, was a product of his times. The greater part of his life was taken up in collating facts and making experiments. His own advice was "Don't think, but try," and Sir James Paget emphasizes this in his introduction. But the trend of modern conviction is, that thought is the all powerful medium. The age of Hunter was just emerging from cold intellectual calculations, and often fallacious deductions from questionable premises. And then came the startling conviction that after all facts and phenomena are nothing without the thought behind; so many bricks requiring the constructive genius of the architect to make of them a palace. But this was a fault of the age, not of the man who, in spite of himself, as Sir James Paget says, "did indeed think." "I spent long times in only thinking." Facts, and observed phenomena, are only useful when related and applied; and to relate and apply require more than the observing faculty—the fire of genius through reflection. Perhaps a phrenologist looking at Hunter's head, might decide to allow him excellent perceptive faculties, but doubtful reflective. And so, years after his decease, we saw the destiny of his collated facts—the product of sleepless nights and early mornings of hard toil—his pupil, relation, and executor, Sir Everard Home, after making selfish use of them consigning them to the flames. Our fight to-day is against all empiricism. We wish to found our knowledge not on such experiments, each succeeding series of which contradicts that which has preceded. We have to found a system built on supreme and eternal laws, the only sure basis of medicine as a science. Such a system requires no vivisection nor cruelty of any sort. This is the lesson one learns from reading this book. One might have wished to see in it many things that one missed, but it is undoubtedly a most readable volume.

A. A. B.

THE Humanitarian League have lately issued two new volumes through different publishers—viz. (1) "Humane Science Lectures," the series of addresses given last winter in London, by Edward Carpenter, the Rev. Douglas Morrison, Chaplain of Wandsworth Prison, Professor Thomson, of Edinburgh University, and Dr. Milne Bramwell (Bell & Sons); and (2) "Humanitarian Essays," being volume III. of "Cruelties of Civilisation," dealing with various subjects contributed by Harry Roberts, Maurice Adams, Mrs. Bradlaugh Bonner, Joseph Collinson, G. W. Foote, and H. S. Salt (William Reeves). The first part of this series dealt with certain social questions of immediate human interest; the second with those questions that more closely affect the welfare of animals. In the present volumes, both kinds are included, but in such proportion as to leave no ground for complaint so often brought against humanitarians—that, while pleading the cause of the lower animals they forget that of their fellow-men.

"THE BROTHERHOOD OF LIFE."

The Editor of the *London Catholic Herald* having attacked the arguments of Mr. H. S. Salt against vivisection, on the above and other points, that gentleman replied in the issue of the journal named, of the 19th ult., in the following terms:—

"I will deal as briefly as I can, and for the last time, with the one or two relevant points.

"(1.) I note that you have somewhat abruptly dropped the subject of Cardinal Manning's attitude towards vivisection, and we hear no more of your first assertion that 'there is no difference of opinion among Catholics as to the thing itself.' It is now 'the brotherhood idea' to which you devote your scorn, forgetful apparently of the 'brother wolf' and 'sister swallows' of St. Francis of Assisi, whose name might have been supposed to carry at least as much influence among humane Catholics as that of the less saintly gentlemen who ridicule the sympathies which to St. Francis were a simple and natural truth.

"(2.) You think that an assertion of the "brotherhood of

all living beings' must involve the recognition of 'equal rights between men and beasts.' It involves no such absurdity. We are agreed, I suppose, that (apart from the animals), all mankind are brethren; but such brotherhood does not establish a dead level of equality between child and parent, servant and master, uneducated and educated, savage and civilized man. Why then should our brotherhood with the lower races imply that we are 'on the same level with them.' Having confused two quite different things, you have pleasantly assumed that I am the 'confused thinker.'

"(3.) You invite me to study animal life, and see 'how this brotherhood idea works out. But how does the idea of 'human' brotherhood work out, as for instance between Turks and Armenians? And if the fact that unspeakable horrors are enacted by men on men does not negative the principle of human brotherhood, what becomes of your argument in the case of the animals?"

"(4.) Your correspondent, Mr. Charleson, who is happily assured that there is a great gulf fixed between himself and the irrational creation, wishes to know 'whose right has been infringed, and whose right has been vindicated, when the cat eats the canary.' The answer, I suspect, must be sought in the similar question as to whose right is infringed, and whose vindicated, when the cannibal eats the missionary."

"In conclusion permit me to quote the following passage from Mr. Frederic Harrison, in order to show your readers that the very ideas which Mr. Charleson, in his ignorance of modern thought, ridicules as assinine, are being adopted by well-known thinkers of the present day. I quote from an essay contributed by Mr. Harrison to 'the New Charter,' a Discussion of the Rights of Animals (George Bell & Sons, 1896.) 'Man,' says Mr. Harrison, 'does not differ from animals in the same way that animals differ from vegetables, or vegetables differ from minerals or rocks. His physical, moral, intellectual, and therefore his spiritual nature does not originally differ in kind from those of the highest mammals. It differs only in degree, and by a vast hereditary and secular evolution. And it does not differ in degree—absolutely and invariably. . . The result of all this is that the lower animals are not separated from us by any absolute gulf, but are our feeble, undeveloped, younger brothers, as it were; below us in degree, in development, in education, in educable capacity, but not below us absolutely in kind.'

"I am quite aware that theology does not sanction this view. But I hardly think that decent Catholics will unite with your correspondent, Mr. Charleson, in his coarse and silly ridicule of it."

The Editor of the *Herald* naturally rejoined in a note, but he did so with ill effect.

HOME INTELLIGENCE.

THE SOUTH LONDON BRANCH.

On the 9th November, by the kind invitation of Mrs. Bisdee, the South London Anti-Vivisection Society held a drawing-room meeting at Mendip House, Honor Oak. Considering the state of the weather there was a good attendance. The speakers were Mr. Lester Reed, F.C.S., F.I.C., and Miss Green. The latter, in her address, compared the sorcery and ignorance of the past, when hundreds of cats, she said, were roasted alive on spits, and animals burnt in ovens, to the misnamed science of the up-to-date vivisector. Both addresses were listened to with much interest and attention by those present—the chief of whom were not avowed anti-vivisectionists. We are requested to state that the South London Anti-Vivisection Society's Committee Room is now at 45, High Street, Peckham—where literature and information can be obtained—or of the Hon. Secretary, Miss E. Watts Phillips, 87, Wood Vale, Forest Hill.

ST. ALBAN'S.

At St. Alban's on Sunday, October 24th, sermons were preached on behalf of the humane treatment of animals.

At the evening service at Spicer Street the Rev. W. Carson

(pastor) said he had been asked and had consented to say something on the subject of kindness to animals. The rev. gentleman took for his text the words contained in Genesis i. 26: "And God said, Let us make man in our own image, after our own likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over every creeping thing that creepeth upon the earth." He thought that this question of kindness to the lower animals came within the scope of the work of the Church of Jesus Christ. They had the Gospel to save man from hell and purgatories of suffering and sin—a Gospel that was destined to bring him into the paradise of joy and peace; but he was afraid that as a church they had overlooked the humbler creation, and had not been as keen to preach a Gospel of salvation for them, from the hand of their cruel masters and rulers. The lower beings were God's creatures. They were the work of His hands, and claimed first of all a special share in the Divine care, and providence, and favour; and as God's creatures they had their rights—rights that God Himself acknowledged, but, alas! oftentimes those rights were overlooked by man. In regard to vivisection he did not claim any special knowledge; but what he said was that to subject God's creatures to torture could not be in accordance with the mind and will of God, who loved not only human beings, but every creature that derived its life from Him.

At the St. Alban's Tabernacle, the Rev. H. W. Taylor preached a special sermon to a large congregation, the text being, "Be thou diligent to know the state of thy flocks: look well to thy herds," (Proverbs xxvii, 23.) The preacher said: Christianity and cruelty—this is the topic of this evening's discourse. So dissimilar and so much in discord are these two, that one is conscious of almost a jar of pain when they are mentioned in the same phrase. Christianity is kind and gentle. Its whole being is suffused with tenderness and sympathy. Its founder was not only loving, but love itself. And it might well revolt the least reflecting, if the sacred name of Christ were for a moment associated with aught that was harsh and cruel. The chivalry of strength in the presence of the dumb, defenceless weakness of our fellow creatures, though lower in the scale they be should make them more considerate and tender. They were slow to accept the guess of science, which was only a guess at best, that these were mostly incapable of pain.

BRISTOL.

On Friday evening, November 19th, at the Batch, St. Phillip's, Bristol, Mr. T. A. Williams gave an address before the Welcome Lodge of the Sons of the Phoenix, subject, "Vivisection Morally Considered." There was a good attendance of the members of the order, Mr. H. Smith presiding. After the lecture Mr. A. E. HERBERT said they were indebted to Mr. Williams for so ably bringing the question before them. That gentleman was doing great good by making them think upon the question. He hated cruelty, and any help he could give to the cause he should be glad to render. He proposed "That seeing vivisection is inseparable from cruelty, misleading in its results, and morally unjustifiable, this meeting records its protest against it, and is of opinion that the practice ought to be prohibited by Act of Parliament. Mr. J. S. PRIDDLE seconded, and related an instance of abuse in operating upon a poor patient. Mr. S. J. WILDING supported the motion and it was carried unanimously. Mr. G. G. TYLER and Mr. H. HAINES proposed and seconded thanks to Mr. Williams for his address. It was decided to petition Parliament, and also that the Lodge should give up its meeting on December 3rd to enable the members to attend and express their sympathy with the movement at a meeting being organized in Bristol by the Friends' A. V. Society.—Mr. Williams has since left to renew his work in Hull and several other large Yorkshire towns.

BOLTON.

A drawing-room meeting, under the auspices of the Bolton Branch of the National Anti-Vivisection Society, was held at Westwood, Bolton, the residence of the Misses Wolfenden, on Wednesday, 3rd November. The Rev. Canon

Doman, M.A., presided. An eloquent and convincing address was given by Miss Goff, who also answered a number of questions which were afterwards put to her. The following resolution was unanimously adopted, on the motion of the Rev. Edward Jump, seconded by Mrs. Crompton, and supported by the Rev. Henry Vannan, M.A., and others: "That this meeting condemns the practice of Vivisection as unnecessary, unscientific, and utterly cruel, and expresses its cordial sympathy with the work of the Bolton Anti-Vivisection Society." A further resolution of cordial thanks to Miss Goff for her address, the Misses Wolfenden for their kind hospitality, and Canon Doman for presiding, was moved by the Rev. W. L. Williams, seconded by Mrs. Greg (Treasurer), and supported by the Rev. C. J. Street, M.A., L.L.B. (Chairman of Committee), and unanimously passed.

MANCHESTER.

On September 30th, Mr. Cox, M.R.C.V.S. (London) gave an address on "The Utilitarian aspect of Vivisection from an Anti-Vivisection point of view," to the members of St. Agnes Mutual Improvement Society, Birch, Manchester. There was a very fair attendance, the Rector, the Rev. H. Norburn, in the chair. In the discussion which followed Mr. Sugden took part; and the Rector said he took the side of the Anti-vivisectionists. The feeling of the meeting was evidently at heart with the Rector.

On Sunday, October 17th, Miss Evans, of Bristol, gave an address against cruelty to animals to the adult classes of men and women belonging to St. James's Church, Gorton. There were about 120 present, Miss Evans mentioned that Vivisection was one of the worst forms of cruelty, and urged all to find out the facts for themselves. The Rev. J. E. Mercer, the Rector, occupied the chair, and spoke strongly against the "devilish cruelty of Vivisection." A vote of thanks was accorded to Miss Evans, and literature was distributed.

On October 18th, Miss Evans addressed the members of the Mutual Improvement Society, in the School of the Primitive Methodist Church, Middleton, on "Animals' rights and how they are respected." The Rev. F. Shimmin presided, there being about seventy persons present. It was a very interesting meeting, and the Rector was favourable to the cause. Mr. T. A. Williams, of Bristol, was present and supported Miss Evans. In the course of his address he asked the people to see their Parliamentary candidate on the question.

On October 19th, Miss Evans addressed a meeting held in the Schoolroom of Christ Church, Moss Side. There was a good attendance, Miss Evans's subject was "A great moral controversy." The Rector, the Rev. J. Challenor, presided. A Dr. Hamilton also opposed Miss Evans. He was efficiently answered by Mr. Cox, M.R.C.V.S., who was present and supported Miss Evans, and by Miss Evans herself.

WESTON-SUPER-MARE.

At the Young Men's Christian Association Gymnasium on Wednesday, October 27th, a meeting was held under the auspices of the Weston-super-Mare Anti-vivisection Society. Mr. F. A. Hyndman occupied the chair, supported by Mr. H. N. Mozley, the Rev. T. Perkins, Mr. T. Beavan Clark, Mr. Arthur Smith, and others.

The CHAIRMAN, in opening the proceedings, said he thought that, physiologically speaking, the experimenters were on the wrong lines, for while all men were animals, all animals were not men. (Laughter and applause.) He did not think there was a nobler profession than that of medicine, and he did not blame its members individually for their support of vivisection, but he considered the practice anti-Christian. (Applause.)

Mr. H. N. MOZLEY moved:—"That in the opinion of this meeting, vivisection should be prohibited by law." The object of the Anti-vivisection Society, he said, was the prevention of cruelty to animals. Etymologically, anti-vivisection meant cutting up alive, but we should extend censure to all cruelty and needless experiments. Cruelty to animals, he contended, was a proper object of legal prohibition, as animals have rights, and should be protected from cruelty. He maintained that vivisection was a proper subject for legal prohibition, for if cruelty was prohibited by law, then it should

not be tolerated on the ground of some remote benefit to humanity. (Applause.)

The Rev. THOMAS PERKINS, in seconding, said there were three classes of creatures for whose sake they desired this reform—First, on behalf of vivisectionists; secondly, for the sake of their poor fellow-creatures, who were subjected to such disgusting cruelties; thirdly, to join to put down cruelty for its own sake. The public suffered from its apathy and indifference, and for all the laboratories in England and Scotland there were but two inspectors. The anti-vivisectionists required from vivisectionists an account of the number, character, and results of their experiments. He would not come before any audience to stop science if the experiments were painless. The greatest men were always on the side of humanity.

On putting the resolution to the meeting, it was unanimously approved.

Mr. BEAVAN CLARK proposed a cordial vote of thanks to Mr. Hyndman for presiding, and to the Rev. T. Perkins for his interesting lecture, and after some brief remarks by Mr. ARTHUR SMITH to the effect that it was better to bear any pain than to blunt one's moral sensibilities, the meeting terminated.

THE SCOTTISH SOCIETY.

GLASGOW.

A meeting was held at 8, Oxford Drive, Kelvinside, Glasgow, on Thursday, the 18th November, the Rev. Prof. McLellan presiding over a good attendance. The Rev. John Baird delivered an address on the present position of the anti-vivisection movement. The Rev. Dr. Kerr, the Rev. J. A. Smith and Colonel Waterston also spoke, and the usual votes of thanks were awarded.

FOREIGN INTELLIGENCE.

AMERICA.

HYDROPHOBIA, THE PASTEUR TREATMENT AND SERUM THERAPY.

Our Animal Friends, of New York, for November, contained an important article on these topics. After citing Dr. Matthew Woods and Dr. Charles W. Dulles as unbelievers in the existence of hydrophobia as a disease at all, the following letter from Dr. Elmer Lee is printed:—

DR. ELMER LEE, 10 W. 49TH ST., NEW YORK.

September 13, 1897.

Dear Mr. Haines,—My friend, Dr. Rosse, has favored me with a copy of the July *Our Animal Friends*. It is my desire to state that my position as to rabies and hydrophobia are precisely in accord with the words of this able observer and writer.

Pasteur, in my estimation, has worked vastly more to the disadvantage of the race and to the wholesale torment and destruction of the animal kingdom than can be measured. Owing to certain favourable influences his words have been accepted as authority by the rank and file of the profession of medicine and by the public as well, resulting in strangely unnatural and sad consequences under the name of science. But so great is the dominant influence at this moment of his teaching, that it is more than a match for the combined influences for the prevention of cruelty to animals, both human and those of a lower grade. That system of modern therapy which is included under the name of serum-therapy, is a constant menace to the animal, and in fact, a detriment to the progress of simple and effective treatment of disease. There is no wider delusion than that which asserts it to be necessary for the treatment of diphtheria that blood from a lower animal, first poisoned and the animal sickened thereby, is essential or useful in the salvation of little children. A paper on this subject, by me, will appear ere long and against the use of animal fluids for the treatment of sickness in the human being.—Sincerely yours,

(Signed) ELMER LEE.

After this the opinions of several French medical men are given, notably M. Pierre Ménégné, of the Academy of Medicine, Paris, who believes that the dog, through its close association with man for generations, has contracted the neuropathy now so prevalent among mankind, and that many cases of supposed rabies are only "temporary manifestations of a nervous condition." Then the emphatic protest of Dr. Weber (also speaking at the Academy of Medicine of Paris), against the misguided policy of the Parisian police in reference to alleged hydrophobia, is given as follows:—

"M. Weber earnestly protested against the alarm which is often

created in Paris by the reports of the police. The usual course when a dog has bitten one or more persons is this: The animal is killed and sent to a veterinary surgeon to make an autopsy; if any strange substances (*des corps étrangers*) are found in the stomach, the animal is pronounced to have been mad, and instantly the persons who have been bitten are assailed with the dread of the most terrible of diseases. M. Weber reasonably and almost vehemently denounced this practice. The presence of foreign substances in the stomach, he declared, is not an infallible sign of rabies, even if those substances were, what is called, the microbe of hydrophobia, since the same microbe is found in the healthy dog. M. Weber therefore insisted that the right method to be followed by the police in such a case would be, not to kill the dog, but to confine it until the nature of its disease should be positively ascertained."

A NEW SOCIETY FOR BALTIMORE.

We have received with much pleasure from Mrs. McNamara, the Society's hon. correspondent at Baltimore, news that a society for the total prohibition of vivisection has been organized by herself and friends in that city. In communicating the good news, Mrs. McNamara writes:—"Mr. Henry O. Haughton, one of your countrymen, is president, and two other members are English; you are, with your consent, elected an honorary member of the Society. There has lately been established a branch of the Pasteur Institute here, and we have the Johns Hopkins University, so famous for its horrible vivisection, so that an Anti-vivisection Society was greatly needed at this place and time, to inform the public on a subject little known outside the profession. The Society intends to carry on its work by means of lectures, distribution of literature, and the prosecution of vivisectors. We have an excellent statute prohibiting cruelty to animals, of which I send you a copy. There is no law here which licenses vivisection; whether we can successfully prosecute vivisectors will depend upon the word 'unjustifiable' in our statute. We will test the matter as soon as possible, and I will keep you informed upon the progress of our work. I feel greatly encouraged in our cause. The literature you so kindly sent me has done great good; it has called attention more because illustrated. I find that animal friends are increasing."

AUSTRIA.

EXPERIMENTS ON HOSPITAL PATIENTS.

We take the following from the *Thier-und Menschenfreund*—"The *Neue Freie Presse* of August 27 reports that at the Moscow Medical Congress, Professor Krafft-Ebing stated that a well-known expert in syphilis in Vienna, whose name he was not at present prepared to mention, had inoculated nine persons, already suffering from softening of the brain, with syphilis poison, which he had obtained from Professor Newman's laboratory, and that he had done this solely for the purpose of experimentation." The *Thier-und Menschenfreund* speaks of the horror and indignation this must cause among all humane persons, and refers to Dr. Berdoe's report of experiments with poison, performed on eight patients of the Baltimore Lunatic Asylum, in order to show that like causes lead to like results among vivisectors in all parts of the world.

TUBERCULIN.

The *Thier-und Menschenfreund*, after declaring its opposition to this "quackery" on the ground that even when apparently successful no one can tell what evil effects it may bear in its train, quotes the following evidence of experts, which throws considerable doubt upon the existence of success of any kind:—"Dr. Valentin Jez, a practising physician, says, in the *Wiener medicin Wochenschrift* ('Vienna Medical Weekly') that "when we consider the various experiences we have had we must come to the conclusion that Koch's new tuberculin has no immunising properties against tuberculosis, much less any powers of healing; on the contrary, we have had the sad experience that the patients who have been treated with Koch's new remedy show a rapid increase in the diseased condition of the lungs. After an injection the *râle* invariably began and the dull area in the lungs increased. Even after the injection of a large dose, there was no diminution in either of these, and the tubercle bacteria were thicker than ever in the spectrum. In the case of many patients a reaction with very high fever set in after an injection of the minimum dose, and nearly all complained of great languor and weakness, of profuse perspiration, coughs, shivering over the whole body, and of pain where the injection had been made; and this lasted two or three days.

Sometimes inflammation and swelling of the wound were observed. Whether these effects were due to the tuberculin itself, or to its being contaminated with various bacilli is not quite clear. We cannot therefore recommend Koch's new tuberculin as a protection against tuberculosis, on the contrary, after our sad experiences we must strongly warn others against using this remedy. Although its price is high we have to complain that as regards purity the preparation leaves much to be desired; and before it is used (if used at all) it should at least be bacteriologically examined."

Another expert, Dr. Schröder, physician to the Hospital for the Cure of Lung Diseases at Hohenhonnef on Rhine, expresses himself also in the strongest manner against the use of the tuberculin. He writes:—"Speaking generally it may be said that a treatment for consumption, which can only be used for a small number of the patients, and in the simplest cases, and which even then demands a long time and a considerable expenditure of money, will not be received with too much confidence by those doctors who can reach the desired end by the old methods in perhaps a shorter time without running the risk of injury to the patients in unforeseen ways." Yet worse is the opinion expressed about the poisonous concoction at the International Congress in Moscow. Privy Councillor von Ziemssen, of Munich, reported that he had met with no success in its use, but had seen only injurious results from it. Doctors Senator and Gerhardt, of Berlin, agreed with him, only Dr. von Leyden showed some hesitation about the matter, but this caused some St. Petersburg doctors, such as Messrs. Kernig, Jawlin, and others to state that the new remedy not only produced fever and increased the progress of the disease, but also spread the tuberculosis throughout the whole of the body. Another speaker declared that he considered it a crime to raise the hand for the purpose of injecting the tuberculin.

GERMANY.

KOCH AND THE RINDERPEST.

The *Deutsche Colonialzeitung* published on the 27th of October another disconsolate letter from Windhoek about the results of the inoculation of cattle by Dr. Koch's method against the rinderpest. The writer says, "People ask why Professor Koch has not answered the important question why great herds are decimated by the pest six or seven weeks after inoculation. The smaller animals fortunately do not suffer from it, but the large cattle cannot long hold out."—*Standard* (London), Oct. 18th.

THE NETHERLANDS.

NEWS FROM THE DUTCH SOCIETY.

Mdme. Van der Hucht, our hon. correspondent at the Hague, writes:—"As to our Dutch Society against vivisection there is bad and good news to relate. In the first place I deeply regret that I must mention the death of our leader and president, Mr. Roorda Van Eysinga, who left us in his 71st year. His last letter, written to me a few hours before his death, treated solely on vivisection and the new organisation of our Society. The subject was always present to his mind, and his life indeed was a life full of suffering because he so intensely felt the sufferings of our poor dumb fellow creatures. Mr. Roorda van Eysinga always did his very best to ameliorate their lot. Our cause lost much by his death, and that of Mr. Stams, to whom we owe the well-written book, 'Over het doel en Wezen van Vivisectie.' The translation of Pastor Knoche's pamphlet 'Het, Wetenschappelijk Dierenmartelen' was widely distributed, thanks to his liberal pecuniary assistance and that of Mr. Fenniseen, a most valued member of our Society.

"The good news I have to tell is the new organisation of our Society, already mentioned. Young and active elements have been added to it, as by the death of Mr. Roorda van Eysinga, Pastor Hugenholtz and myself were the only members of the direction left. It now consists of Mr. Th. F. L. Ortt, president; Rev. J. B. T. Hugenholtz, vice-president; Miss Marie Jungins, secretary; Mrs. Roorda van Eysinga, treasurer; Miss Groshaus, Mr. Criellaert, Mrs. C. van der Hucht. In the course of the year several new and important publications have been issued.

"We thankfully acknowledge some progress in the good fight for humanity and right, of which progress a considerable increase of members since last year is the happy result."

PUBLICATIONS OF THE NATIONAL ANTI-VIVISECTION SOCIETY.

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The object of the Society is to awaken the conscience of mankind to the iniquity of torturing animals for any purpose whatever; to draw public attention to the impossibility of any adequate protection from torture being afforded to animals under the present law; and so to lead the people of this country to call upon Parliament totally to suppress the practice of Vivisection.

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THE ZOO PHILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 9.]

LONDON, JANUARY 1, 1898.

[POST FREE, 3½d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE bacteriologists have discovered that hand-shaking is a dangerous custom. The practice entails such an interchange of microbes that it is nearly as bad as kissing.

CANON KNOX LITTLE, in his *St. Francis of Assisi*, says (p. 152) with reference to the legends about St. Francis and the birds—

"Strangely enough, as it seems to us, the creatures of God's hand recognize, as we often find, simplicity and purity of heart and goodness. I myself have seen a good man with all the birds of his garden perched upon his head, or his hands, or his shoulders, or standing about his feet and refusing to be frightened or to leave him. Nature," adds the Canon, "is God's Eucharist."

THE *Therapeutic Gazette* of November 15th (p. 789), makes the following suggestive admission:—"In the same way a Therapeutic Society might do much to restore order among the chaotic notions that exist in the profession with regard to the animal extracts." We are glad to see our opinions on the subject endorsed by an

orthodox medical paper. We find ourselves in better company every month.

ACCORDING to a report in the *City Press* (November 24th) the Metropolitan Asylums Board, at their meeting on the Saturday previous, bound themselves to take a supply of anti-toxin serum for diphtheria from the Laboratories Committee of the Royal Colleges of Physicians and Surgeons FOR THE NEXT SEVEN YEARS! Who can say that the belief in the nostrum will not be exploded long before that time? Many good judges think it will.

THE resolution committing the Board to the above-named decision did not pass without protest, and rightly so. Nor did the application of anti-diphtheritic serum in a preventive sense to boys in the Maidstone Workhouse, about the same date. At a meeting of the Maidstone Guardians, we learnt from the *Daily Chronicle* (November 28th):—

"The clerk (Mr. R. Hoar) reported the receipt of a communication from the Local Government Board asking for information as to what steps had been taken to deal with the outbreak of diphtheria amongst the children at the union workhouse at Coxheath. A copy of this letter had been forwarded to Dr. Jones, medical officer at the house, and that gentleman had replied detailing the measures which he had adopted.—Mr. Hewett expressed the opinion that Dr. Jones should have consulted the Board before treating the boys at the workhouse by injecting anti-diphtheritic serum. This was a system that was only in an experimental stage, and it was not recognized by the medical profession as a preventive of diphtheria. He had learnt since the last meeting of the Board that not only was the new method of vaccination dangerous, but that it had in some cases actually caused death. That it was not a preventive of the disease was proved by the fact that there had been one or two further cases of diphtheria since the children were treated.—Mr. Roberts thought the new system involved another method of vaccination that was very objectionable."

We understand from this that the serum was applied preventively, and all that Mr. Hewett and Mr. Roberts said about the procedure was no doubt true.

THE *Lancet* of the 11th ult. had two editorial notes which were plainly contradictory. In the first one Dr. Yersin's labours in the prevention of plague at Bombay by the injection of horse serum was extolled; in the other the spread of plague at Poona and elsewhere, in spite of all attempts to impede it, was deplored. It seems that in order to prepare a stronger serum Dr. Yersin injected his horses with living cultures of the plague bacillus. The result was that one-half the horses died. The computations of lowered death-rates put forward on behalf of Dr. Yersin were no doubt illusory and unreliable. The percentage of deaths ranged from

12 to 75 per cent., but the effect of the latter high figure—three out of four—is sought to be obscured by striking a mean between the two extremes. Dr. Yersin, the *Lancet* states, approves the sanitary measures taken by the Anglo-Indian authorities, and however that may be, it is fortunate that such measures are being taken, as they are the only ones that can save the lives of the Indian population in the stricken districts.

A TERRIBLE tale is told in an article on another page, which we quote from the *Lancet*, of the fatal effects of diphtheria in London in the four-weekly period ended on November 6th. When sanitation has done so much for the mitigation of other deadly diseases it is astonishing that it should stand apparently helpless in the presence of this almost constantly increasing mortality from diphtheria. Dr. Poore, the Inspector under the Vivisection Act, sometimes poses as an authority on the public health, and we noticed that he remarked not long since that diphtheria was a disease due to overcrowding. If that be so, surely it is time to take steps to abate the overcrowding that exists, especially in schools. Whether Dr. Poore be right or not in his opinion, it is clear that the anti-toxic-serum nostrum of his clients the vivisectionists has failed, because the *Lancet* in its article shows that the case mortality rose from 15.6 to 16.8 per cent. Had the serum been potent the percentage should have fallen.

THERE is an overwhelming majority of remedies and methods of cure which no one pretends have been discovered by experiments on animals. There are some things which it is pretended without foundation that we owe to vivisection, and a third class which, although they emanate from the experimenter's laboratory, could have been discovered by legitimate research in other directions. The vivisectionists claim the introduction of thyroid extract as a cure for myxœdema discovered by experiments upon animals. Even if we grant this—which we are far from doing—it is plain to demonstration that the remedy could have been found out by the methods of physiological chemistry.

THUS Dr. F. Blum, of Frankfort-on-Main, asserts that an iodo-proteid given to dogs prevented symptoms and preserved the life of the animal after thyroidectomy. When iodine is mixed with egg albumen a precipitate is formed under certain conditions. This is called iodo-casein, which can also be obtained by acting upon milk with iodine. It is this substance which has been found equal to thyroid extract (if not actually identical with it) in the treatment of disease consequent upon loss of the thyroid gland.

Now all this could have been done by the chemist in his laboratory without a single experiment upon an animal. Mr. Lawson Tait long ago pointed out that in the detection of poisons "Vivisection is not the weapon of science, but is the refuge of incomplete work." The whole history of myxœdema and its treatment by thyroid extract is a flagrant example of the unscientific methods of vivisection, and a standing rebuke to the researchers who should long ago have chemically investigated the nature of all gland substances.

ELDERBERRIES which are used to make wine and sophisticated port, are said by Stillé and Maisch to be poisonous to hens, while the innocent flowers from which elder-flower water is prepared are poisonous to

peacocks. The berries of the yew are a deadly poison to man, yet squirrels eat them with impunity.

SERUM therapeutics would seem to be in a bad way just now. Professor Virchow has raised his powerful voice in protest against the inoculations; he says, according to the *Pall Mall Gazette*—

"The hope of discovering a serum against tuberculosis rests on the assumption that we will be able to impart to the cells a resistive power against the tubercule bacillus by properly conducted inoculations. It has, however, by no means been proved that the development of this bacillus is dependent upon the cells. This is merely an assumption on which all these serum therapeutics have been built. We know next to nothing regarding the conditions under which the bacillus sets foot in the body, or of the period during which it is able to exist in it. The voices that speak so confidently of the prospect of an effective cure and of a protective serum appear to me to be altogether too optimistic."

DR. E. L. GROS, of the Faculty of Paris, says in his essay on gout and rheumatism, "Strange as it may seem, in this era of marvellous discoveries and undreamed-of wealth of knowledge, this very subject is not much more advanced than in the days of Hippocrates." Yet Professor Richet says, "In ten years medicine has been entirely overturned and remade."

CZAPLEWSKI and Hensel think they have discovered the bacillus of whooping-cough, but "experiments on animals have as yet been negative." One of the experimenters, however, contracted a cold in the head and very nearly whooped himself.

M. QUINTON recently informed the Paris Society of Biology that he had bled animals to such an extent that they would surely have died if left to themselves, and he had then administered to them intravenous injections of sea water which had the effect of restoring them. He considers that sea-water is as useful for such a purpose as artificial serum. He did not appear to have convinced his audience, however. It seems to us an altogether useless and absurd experiment, to say nothing of its cruelty.

THE *New York Medical Journal* (November 6th, p. 644) contains an article on auto-intoxication, which suggests an important modification of the germ theory of disease. The new theory is that we can poison ourselves with chemical toxins mysteriously elaborated in our own system, apart from any external agency; this is termed self-intoxication. Thus, headache may be caused by a poisonous principle generated by our digestive organs when disordered. Of course, no new medical theory must receive attention unsupported by experiments on animals, and so we are not surprised to learn that Messrs. Lambert and Van Gieson infused into rabbits the serums obtained from several victims of sunstroke; but they say their experiments were too few to be of much value. The theory is not so new as suggested. We have long been acquainted with the fact that an animal's flesh subjected to prolonged severe torture is poisonous to those who eat it.

DR. WESLEY MILLS communicated recently to the Royal Society of Canada, the results of some researches on brain localisation, which prove that Professor Ferrier's theories on the subject are open to considerable doubt. Dr. Mills, for example, has entirely failed to find the brain centre for the hind limb in young rabbits and

declares that apart from Ferrier's distinct statement, there does not seem to be any clear evidence of the existence of such a centre. He thinks that some experimenter's "animals were not at the moment properly under the influence of an anæsthetic," a very suggestive reflection, "and that a haphazard movement was mistaken for a genuine one." He goes on to say—"whether the centre exists, but it is too ill-organised to be perceptible to stimulation by our rough experimental methods, whether it is too readily disordered by operative procedure to allow of experimental determination, I do not know." All this, and much more of the same kind, helps to confirm us in our suspicion of the methods and alleged results of all research of this character.

ONE of the most beautiful, delicate, and complicated structures in the animal organism is the kidney. Only the microscope can reveal its wonders, and then it is easy to understand the agony caused by disease or obstruction of its sensitive mechanism. Dr. Rose Bradford has just reported to the Pathological Society the results of some experiments he performed on dogs by cutting down upon and tying the tubes called the ureters, which lead from the kidney to the bladder. The tubes being ligatured it was impossible for the kidney secretion to find its way into the bladder, consequently the kidney was distended to the size of the fist after an interval of suffering lasting from ten to forty days. Of course anæsthetics were out of question in such a case. In three out of the twelve victims inflammation of the kidneys leading to abscess was set up. The cases are described in the *Lancet*, December 11th, and the *Medical Week*, December 10th.

EVEN the torturers at Alfort have found it necessary to excuse themselves, after the many years we have been exposing their cruelties. Professor Cadiot, of the Alfort Veterinary School, in the preface to his book on *Equine Surgery*, says—"All operations are made on the cadaver except those on the animal while in a state of anæsthesia, secured by an intravenous injection of chloral hydrate." But this is no true anæsthesia at all. Naturally, the *British Medical Journal*, reviewing the work, says, "It is satisfactory to find this refutation of serious allegations of cruelty, levelled by some Transatlantic anti-vivisectionists against the Alfort surgery class, which appeared in English newspapers about a year since." The Editor takes the anti-vivisectionists for great simpletons if he thinks a dose of chloral hydrate will soften their criticisms on Alfort.

IN perusing works on the nervous system we often meet such admissions as the following, taken from the *Archives Provinciales de Chirurgie*, No. 9, 1897, where Dr. Lambert says, "The results of physiological research on this question [of the reflexes in injuries of the spinal cord] are opposed by those of clinical surgery and of pathology." Are we not then warranted in our scepticism about the value of experimental research on the nervous system?

THE *London Hospital Gazette* for December contains an elaborate article on the "Physiological Laboratories of Paris." The English visitor to the School at the Sorbonne, who was evidently an enthusiastic experimenter, says—

"Perhaps the room which more than any caused one to break the tenth commandment was the apparatus room. Here are kept all the more delicate and costly pieces of

apparatus, and, to the student of physiology, it is a 'chamber of delight.'"

AGAIN, we are told that, "the tables for operation were all of grained oak, and the appliances for securing the animals, of nickel silver."

"We went next," says the narrator, "to the houses containing the animals necessary for experiment. These are kept beautifully clean and fresh. . . . Not far from here was the operating theatre where operations in which it is necessary to keep the animal alive for some time afterwards are performed."

The concluding paragraph of the article is instructive—

"While admiring the splendid arrangements of the Sorbonne, we must not consider, however, that these are essential to success, for Claude Bernard, one of the greatest of physiologists, did all his work in a cellar. And though in London we have not such elaborate buildings, yet English physiologists are in the front rank of advance, and not a whit behind their Continental *confrères*."

DR. MCCALLUM, Professor of Physiology in Walton University, London, Canada, writing in the *British Medical Journal*, for December 11th, p. 1709, suggests the employment of antitoxic serum in other diseases than diphtheria. He has used it in phthisis, sciatica, cancer, typhoid fever, and a dozen other diseases; in fact, in his opinion, it is a panacea for all our ills. We seem to remember that when Koch's tuberculin became such a disastrous failure holders of dead stocks of the stuff tried to palm it off on the medical profession as a sort of cure-all for *everything but consumption*. Possibly antitoxic-serum vendors are also preparing for other outlets for this commodity.

THE STORY OF KARO.

(FROM THE "ECHO," LONDON, DEC. 7TH.)

"One real view, one minute absolutely spent in the slave rooms on the middle passage, would do more for the cause of humanity than the pen of a Robertson, or the whole collective eloquence of the British Senate." Those were the words of a British officer who was employed in the slave trade last century, and who, we may suppose, must have been pretty well hardened in his trade. He was quite right in his opinion of the power of ocular experience. We may feel sure that most of the Christian Englishmen who, exactly a century ago, petitioned Parliament against the Bills for the abolition of slavery, would have rushed to erase their names from the paper, if they had only seen with their own eyes, and were it only for a few moments, the "'tween decks" of a slaver on her trip from the Guinea Coast to the West Indies and North America. In most people "the mind's eye" is still in a rudimentary state. Only in the minority does the imagination serve the purpose of the physical eye in the majority of mankind. Nor is this true of the so-called lower classes only. On the contrary, it is possible that the blindness of the mind's eye to pain and misery is more common among the classes than among the masses. Mr. Charles Booth would vastly help the warning of his books on London's poverty if he could get the classes to look upon a series of stereoscopic slides of slum wretchedness.

What the Slaver officer said about man's inhumanity to man is equally applicable to man's inhumanity to dumb animals. Accordingly, "The Story of Karo" [the republication of which by Miss Cobbe we announced last month,] is told by Seigwald Dahl in a series of twenty-one pictures without a line of printed comment. The only comment of any kind is the printed table of contents. But as a matter of fact the table is unnecessary. The twenty-one pictures of the little dog Karo tell their tale, directly, infallibly, and with a pathos deeper than any unaided speech can ever convey. Put up these pictures in their consecutive order upon the walls of any elementary school in the British Isles, and I

guarantee that the youngest pupil can *speak* the story right off without a break.

No: not quite that, now that I think of picture No. 21. In that picture Karo is strapped down on his back, on the trough, without the glimmer of vaguest suspicion of the tortures he is about to endure at the hands of the Vivisector, who stands beside him with shirt-sleeves upturned. The elementary school child knows not what Vivisecto-devilry means. But the preceding twenty pictures will present to him no difficulty whatever. I mention this because I think it would be a good plan if these pictures were distributed among schools. Parcels of copies may be had at cost price, through Miss Cobbe, at Dolgelly, or of Mr. B. Bryan, 20, Victoria Street. Single copies may be obtained free at the latter address; and I hope that adult readers of this notice may take advantage of the opportunity.

In the first picture Karo is seen, first, chained at his hutch in winter time, seated, with an up-lifted paw, in the snow; and next, in the same spot in the summer time. Karo's earlier enemy was cold, now it is thirst and heat. In the next group of pictures a kindly passer-by takes notice of Karo, gives him something to eat, and pats him on the head; the last detail indicating the friendship that had grown up between the two. Next comes the sale of Karo to the stranger, who is seen dropping the price into the owner's hand, Karo looking on. As the stranger leads him away Karo turns round to look at the old home, where it is clear that he was more neglected than petted. In the succeeding group of pictures it will be seen that Karo's new master has grown more or less completely blind. Karo leads him. Karo, with his forepaws raised against a doorway, pulls a bell-rope. When you turn over the next page, and the next, you find the whole of the wanderer's life revealed. He is a beggar. He and Karo share their meals together. Karo has his paws and chin on the table upon which his master empties his day's gatherings. While the mendicant practises upon his flute at home, Karo is his only listener. Karo carries his master's stick and receives contributions from the village children, who gather round the player. And so on. Then we come to a picture showing the blind man stretched on his bed, and patting Karo's head. At the foot of the page the dog is seen licking the hand of his master, and in a corner, a coffin carried by three men, one of whom the dog is attempting to hold back, tells its own story with sufficient plainness. Karo digging at his master's grave is a typical incident in dog life, as readers of dog anecdotes are well aware. Karo, you see, is only to be removed by force. He holds back, as his captor, switch in hand, draws him with a string. And in the last page we see who the captor is. Karo is being thrust into a cage, beside which there are boxes or cages containing rabbits and other creatures. The lower half of the picture exhibits the last stage of Karo's helpful, affectionate life; he is tied on the Vivisector's table awaiting his doom, while the operator, knife in hand, is addressing an invisible audience, explaining, we must suppose, what the experiment is intended to demonstrate.

It will be said that between the human sufferer and the dumb animal there is an enormous difference. So there is. But the difference is rather in degree than in kind. . . . Ethics are not for human beings only. Humanitarianism is not restricted to the human beings after whom it is named. It embraces all conscious, sensitive life. There is no break in ethical obligation. Cruelty to a human being, and cruelty to a dog Karo is, in essence, one and the same thing.

HOME INTELLIGENCE.

BRISTOL.

At Brookland Church, Lower Ashley Road, Bristol, on Tuesday evening, Nov. 23rd, Mr. T. A. Williams gave a lecture in connection with the Bristol and West of England Anti-Vivisection Society, on "Vivisection, Cruel and Useless." Mr. J. D. Marshall presided over a good attendance.

Mr. WILLIAMS urged that there could be no real reform for society which did not reckon with the great question of Vivisection. He might be told that Vivisection was not necessarily cruel, but, notwithstanding the use of anæsthetics,

he wished to give that statement a denial. If vivisection was proved to be useful, it proved too much. It proved unmistakably to his mind the need of human experiment. He had no hesitation in saying that if vivisection was to be permitted because it was useful, it must be human vivisection. He concluded with an appeal to his hearers to save the animals from suffering.

Mr. WM. CLAPP proposed:—"That, seeing that vivisection is misleading in its results, inseparable from cruelty, and morally unjustifiable, this meeting records its protest against it, and is of opinion that the practice ought to be prohibited by Act of Parliament."

Mr. E. EDWARDS seconded the motion, which was carried.

FRIENDS' ANTI-VIVISECTION SOCIETY.

There was a good attendance on Friday evening, Nov. 31st, when a meeting in connection with the Bristol and Somerset Friends' Anti-Vivisection Society was held in the Cutlers' Hall, Friars. Mr. Joseph Storrs Fry presided, and there were also present Messrs. Charles E. Frank, F. J. Williams, T. A. Williams, Mrs. M. A. Tanner, Mrs. Mary Priestman, and others.

The Rev. T. PERKINS, who gave the address, said that he had asked the opinion of a very eminent doctor, whose opinion he valued very much, and he said that vivisection as a rule led to nothing, and medical men as a body did not believe in it. Yet there was a craze at the present time for asking questions of nature by means of experiments. That craze for experiment was becoming very prevalent at Cambridge, and had spread throughout the country, and people thought they must experiment upon everything. There were numbers of noble men in the profession, but there were others who took it up as a business, and were unscrupulous, and would work by any means for their advancement, and found that a reputation as experimenters was a good advertisement. He thought the public was hardly free from blame for not taking a more prominent part in the crusade against this cruelty. It was a moral question, and if they sought after any object in an immoral way they would not succeed. He hoped that they would not go from the room thinking that it was for the good of humanity, but rather with the determination to take part in this crusade of mercy. He was sure that they would not regret it. They must be unselfish, and strike a blow for the cause of righteousness. He was quite certain that everybody's conscience could commend the effort, which was to get rid of this great evil in the midst of them. It was not a small matter. It was one that would cause very great mischief not only to poor dumb creatures, but also to human nature.

Mr. T. BEAVAN CLARK proposed a resolution to the effect that the meeting considered that the practice of vivisection was immoral and unjustifiable, and desired that a Bill be introduced into Parliament for its total abolition; also that a copy of the resolution should be sent to each of the local members of Parliament.

The motion was seconded and carried. A petition to be sent to the House of Commons in favour of total abolition was also carried.

BUXTON.

MEETING IN THE TOWN HALL.

(FROM THE "BUXTON ADVERTISER," NOVEMBER 27TH.)

A meeting under the auspices of the Buxton Branch of the National Anti-vivisection Society was held at the Town Hall on Tuesday night, November 23rd, when there was a large attendance, including several clergymen, and ladies and gentlemen who take deep interest in the objects of the society.

The CHAIRMAN (the Rev. E. P. Riddall), read a letter from Mr. J. W. Taylor, who expressed his sympathy with the society. The Chairman said that he felt he stood there as a representative of the Rev. C. S. Green, who warmly sympathized with the objects of the society, and furthered them by all the means in his power. He must also say that credit was due to the fact of their possessing an energetic secretary in Miss Jackson, that much was being done in the desired direction. (Applause.) He had felt strongly for a long time that one great hindrance to advancement was the unreasonable reluctance that so many people had to *post mortems*. This society could not do better than try to remove the prejudice that was in the minds of people and lead them to submit. After death a *post mortem*

examination did no harm. It might be a little bit repulsive to the feelings of friends, but if obscure disease could be traced, or complicated diseases the better understood through that means, there was no telling the amount of suffering and disease that might be prevented. He hoped to be rightly understood about that, and say if it should be his lot to be taken away by any disease that puzzled medical men, anything that was difficult to understand, or if in any way through the examination of his dead body he could be helpful to others of his fellow creatures, he should have no objection in the world to it, and he did not see why anyone should.

The Rev. T. PERKINS, of Blandford, Dorset, then delivered a lecture, which was interesting, pointed, and instructive from opening to close. Vivisection, he said, meant the cutting up of living creatures, but it was now generally used in a somewhat wider sense than that. It included the cutting up of animals for the purpose of examining their internal organs whilst they were yet alive. It also included the administration of drugs, inoculation, and examination of the effects of those drugs and inoculation. Were they justified in performing those experiments? It was a scientific and a moral question. Medical men assumed that it was entirely scientific, and that morality had nothing to do with it. On the other hand those who were not medical men thought the moral standpoint the one they could best occupy. Science had always had a great fascination for him, but there was the right and the wrong way of pursuing scientific experiments. No one could perform those scientific experiments without blunting his moral nature, without injury to that feeling of mercy and compassion which was a God-planted instinct in every human being. The lecturer proceeded to illustrate the cruelties practiced on dogs, cats, rabbits, frogs, etc., in vivisection, and their sufferings during the whole time such animals were kept alive. Men were, he said, led away by their zeal for science to perform actions that they felt, at first, a great repugnance in performing, but they grew so accustomed to it that they did it without the slightest hesitation. It was said that the medical profession and the public believed in it, but that large gathering showed that Buxton people were not indifferent to vivisection. There were animals that expressed their love and affection for him, and if by being vivisected his life might be saved, he would prefer, rather than that should be done, to endure the pain and die and go into the presence of his Maker free from the blood of His innocent creatures, sooner than have his life prolonged at the expense of those harmless creatures who had never done any harm to him or anyone else—their confidence he would not lose or love abuse to save any pain that might come to him. (Applause.) Then there were great doubts whether the results obtained by vivisection were trustworthy or not.

Votes of thanks were, at the close, accorded the chairman and lecturer.

(For remainder of Home Intelligence see page 161.)

Dr. Haffkine, in a letter to the *Bombay Gazette*, printed on the 4th of November, said, "All my attempts in connection with the treatment of plague on the anti-toxin serum plan have given, up to now, an invariably negative result." He claims, however, success for his preventive treatment; but of course no one can say whether the persons to whom it was administered would have been attacked by the plague. When patients die it is obvious they have not been benefitted; but if they live the claim of benefits can be made if not substantiated.

The following is taken from the *Bombay Gazette* of the 8th of November, 1897:—"The Honourable Dr. Bhalchandra Krishna Bhatwadekar, who presided at a public meeting, which was held at Madhav Baugh, under the auspices of the Indian Anti-Vivisection Society, to oppose the proposed establishment of a Pasteur Institute in India, has received the following letter from the Secretary to the Government of Bombay:—"Sir, I am directed to inform you that your letter, dated 24th July, 1897, and the copy of the resolution which accompanied it, have been laid before the Governor-in-Council. I am to add that the Pasteur Institute in this country has not been established by Government, and that no contribution to it will be made by this Government without the fullest consideration."

FORMATION OF A NEW BRANCH OF THE NATIONAL ANTI-VIVISECTION SOCIETY IN SUFFOLK.

A large and highly influential meeting was held in the Assembly Room of the Young Men's Christian Society at Ipswich, on Friday, December 17th, for the purpose of taking steps to form an Ipswich and East Suffolk branch of the National Anti-Vivisection Society. Mr. Wm. Piggott presided, and several clergymen and Nonconformist ministers, besides many ladies, were present, including the following:—Revs. T. J. Hosken, E. J. Gilchrist, W. S. King, E. J. Baker, A. A. Dowsett, T. Wickham Tozer, J. H. Jennings, —. Teesdale, J. Saunders, W. H. Williamson, S. Green, J. Lewis Smith; Mr. R. L. Everett (late M.P. for South-East Suffolk), Mr. H. M. Biddell, Mr. D. Panton, Mr. T. Harrison, Mrs. Luther Holden, Mrs. Fry, Mrs. Griffiths, Mrs. and Miss Williamson, Mrs. J. P. Cobbold, Mrs. N. Cobbold, Mrs. Reynolds, Misses Roberts, Miss Anna Biddell, Mrs. Vulliamy, Mrs. Kirby, Miss M. Biddell, Miss Botwood, Sister Lucy, and many others.

The CHAIRMAN, in opening the meeting, stated that letters had been received from a number of ladies and gentlemen regretting their inability to be present, and expressing sympathy with the movement. He thought that all present would wish that the greatest publicity should be given to the barbarous treatment to which animals were subjected by vivisectionists so as to make it evident to the world that it was wholly unnecessary, and that no useful purpose was served thereby. Let them persevere individually and collectively amongst all their friends to crush out the demoralising practice of vivisection. (Hear.) Happily they were not without striking examples of success which had followed efforts to put down cruelty in other directions. The frightful practices of bull-baiting, dog-fighting, and cock-fighting had been crushed by the influence brought to bear on the part of those who looked upon such proceedings as a crying evil and shame. If the efforts of right-minded people had been crowned with success in these matters it was certainly not too much to hope that they would be equally successful in putting down vivisection with its attendant cruelties. There were various ways in which they could help the National Anti-Vivisection Society, and he hoped that one and all would take the subject to heart and do their utmost to promote the good objects which that organization had in view. (Applause.)

Mr. B. BRYAN, Secretary of the National Anti-Vivisection Society, proposed the first resolution, as follows:—"That vivisection, being cruel, and indefensible from any point of view, ought not to be permitted, and this meeting pledges itself to do all in its power to obtain a law to prohibit it." He remarked that there was a law at present in existence which gave the sanction of the State to these practices, and all those who had studied the matter closely from a humane point of view felt how deeply necessary it was to supersede this law by another which should prohibit the practice altogether. (Hear, hear.) Vivisection, or experimenting upon living animals, was nothing new. It had been practised during 2,000 years of the world's history, and not only upon animals but even on mankind. If the object of experimentation was to elucidate the mysteries connected with the human body it followed that the most useful vivisection would be that carried out on mankind. But we had so far advanced in civilization that at all events the desire for human victims was not publicly acknowledged here, though surreptitious experiments were said to be sometimes carried out on patients in hospitals and other public institutions. Although the practice of experimenting upon living animals had gone on for the long period he had mentioned, the medical profession were still largely puzzled with problems that arose in the bodies of their patients when they were suffering from morbid symptoms, or some disarrangement of their bodily machinery. The probability was that however long the medical profession went on the track of vivisection in their search for a solution of those problems they would not solve them and so be able to treat their patients with greater success. Those who had most experience of medical men would, he thought, agree that the most useful and successful medical practitioner was the man who studied human beings most as patients and

had never experimented upon living animals. (Hear, hear.) Many of the most successful surgeons and physicians had never experimented on animals, and not a few would say if you asked them privately about it that they had no faith in the practice. (Applause.) A Royal Commission sat on this subject some years ago. A good deal of evidence was taken, and the Commissioners in their report came to the conclusion that the practice of experimenting on living animals was liable to great abuse, and that liberties had been taken with them in the infliction of pain and suffering by highly-placed physiologists which were absolutely unjustifiable. The Royal Commission recommended that an Act should be passed to control or restrict the practice. An Act was accordingly passed in 1876, and although it was a restrictive Act, it was a most remarkable thing that the number of vivisections carried out on living animals had ever since continued very largely to increase. In 1887, eighty-two persons were licensed to perform vivisections, and the number who experimented was sixty-four. In 1896 the number of persons licensed was 236, and 166 experimented. In 1887 the experiments totalled up to 1,220, while last year the total had grown to 7,590. Thus it would be seen that the so-called restrictive Act had failed, and they would almost have been better off under the old law of the land, rather than under the new Act which laid down a new set of conditions. Certain penalties were enacted for causing pain by vivisectors, that for a first offence being not exceeding £50, and for a second £100, or in the alternative not exceeding six months' imprisonment; but the Act went on to give the Secretary of State power to issue licenses and certificates to men to commit these offences. There was no doubt that Parliament intended to protect the animals, but as a matter of fact there were not sufficient inspectors to control what was going on, and the conditions were as bad or worse than before the Act was passed. The Royal Commission said in their Report, "We trust your Majesty's Government and the Parliament of this Kingdom will recognise the claim of the lower animals to be treated with humane consideration, and will establish the right of the community to be assured that this claim shall not be forgotten amid the triumphs of advancing science." Anti-vivisectionists were often charged with opposing science; they were doing nothing of the kind—they were simply opposing cruelty. (Applause.) He regretted to say that experience of the present law showed that the right of the community to be assured that the claims of the lower animals to be treated with humane consideration had been largely forgotten or certainly neglected, and the members of the Society desired that there might be increased stringency in the administration of the law in order that these animals might be saved from the sufferings they had to undergo. (Applause.) Parliament endeavoured to carry into effect the recommendations of the Commission; the law as administered did nothing of the kind. The principal Inspector was a Professor of University College, London, where a number of his colleagues were vivisectors, and it was almost impossible that he could hold the balance of justice evenly between the vivisected animals on one side and the vivisectors on the other. In his last report to Parliament the Inspector said:—"(1) That licenses and certificates have been granted and allowed only upon the recommendation of persons of high scientific standing. (2) That the licensees are persons who, by their training and education, are fitted to undertake experimental work and profit by it. (3) That all experimental work has been conducted in suitable places." All this went to the character of the "persons" and "places" and not to the question of the sufferings of the animals, which should be uppermost in the mind of the Inspector, who was put in the position of carrying out the wishes of Parliament to protect the animals; he had, however, little or no regard to the animals. What was complained of was that the present restrictive Act was no remedy against cruelty and no benefit to the animals. (Hear, hear.) The Inspector lived in London, the vivisector was, say, Manchester. The Inspector seldom went to Manchester. With the vivisector in his laboratory at Manchester, and the Inspector elsewhere, there was really little or no control over him, and he might do what he pleased for months at a time. (Hear, hear.) Perhaps they would like to hear some illustration of what it was the vivisector was pleased to do to an animal sometimes when he had the chance. The Report

annually issued to Parliament and the public concealed much of what actually went on; the Inspector being friendly to the vivisector and not to the animals, he naturally endeavoured to screen his brethren. He had there a report of experiments on the cerebral circulation by Mr. W. M. Bayliss, B.Sc., and Mr. Leonard Hill, M.B. This report began by saying that "the animals employed for this research were in all cases dogs. Throughout the experiments morphia was used." As a matter of fact morphia was simply a stupefier. Nobody would have a tooth extracted under morphia. Dentists always used gas or a true local anæsthetic like cocaine. He (Mr. Bryan) need hardly go into the details, but this was one of the methods of research: The carotid artery in the neck was cut down upon and dissected out, and a tube was inserted in it. The vein was also exposed, and a second tube pushed down it to the heart. If the animals were only under morphia they would suffer extremely; if under chloroform they would not. These animals were cut about in the severest possible manner whilst they were alive, and were experimented upon for a long period. Curare was used, which paralysed the animal, and did not diminish in the least degree the sensibility to pain; the animal could feel though it could not move. Some people said that the anti-vivisectionists ought to be content if they could get the experiments restricted, but what they objected to was cutting these animals about in this way at all. What they said about inspection was that it was spurious like the morphia when used as an anæsthetic. If an experiment were made on an animal under chloroform or other effective anæsthetic, the phenomena observed would not give the evidence of truth, because you could not say how much of what was observed was due to the drug, and how much to the natural motions of the organs. If no chloroform were used, pain resulted, and that would again prevent the evidence of truth from being obtained. Was it remarkable then that from these experiments, as a rule, nothing but misleading evidence had been obtained? (Hear, hear.) If you could not get the evidence of truth either with or without anæsthetics, what was the good of it all? (Applause.) Mr. Bryan next referred to a series of painful operations as described in the *Lancet*, the animals being kept in a state of torture for ten to forty days. This he spoke of as probably one of the worst of all possible tortures, and for what purpose? To find out what was absolutely well-known before,—that a part of the human body put out of use would atrophy and shrink up. Were not the anti-vivisectionists quite justified in demanding a remedy for such a state of things? (Hear, hear.) Referring to the current bacteriological fad, he said, almost everything one suffered from now was said to be due to bacteria or bacilli. As a remedy anti-toxic serums were injected into patients, and he had heard a vivisector declare that this system had brought them to the threshold of a new medicine. They had been experimenting for 2,000 years; generations of medical men had been piling up the experience which they had gained—and the only experience worth anything was the result of clinical practice on human beings—and yet the vivisectioning bacteriologists now said, "We are at the threshold of a new medicine." What had we been paying our fees for before? Did our doctors ever know anything? Was the old system an entire delusion? The young men who were thus pretending to know better than their elders, who set up this new medicine, would have them believe that the practice of the past was on wrong lines, that hitherto the doctors had treated their patients without knowledge, and almost without motive, that they had paid their fees in vain; but when they came to look at this matter by the light of experience, they did not find the new medicine any more efficacious than the old. (Applause.) As an instance, he showed how the mortality from diphtheria had increased in London since the use of antitoxic serum was introduced, and said better results had been obtained under the old methods. Dealing with the excitement which prevailed some years ago in reference to Koch's alleged discovery of a remedy for consumption, Mr. Bryan quoted Virchow as saying that so far from it being a remedy it actually carried the disease into parts of the body where before it did not exist. With regard to Koch, Dr. Burdon Sanderson, referred at a Jennerian Memorial meeting to "that dark day when Koch's tuberculin was shown to have failed." It was indeed a dark day for the bacteriologists when the nostrum of the greatest of

them all, one which led the way, had admittedly failed. (Applause.) Whilst deep concern was felt by many persons about the cruelties practised on animals, it was also a matter which concerned their pockets as taxpayers, many experiments being made at the public expense. He was glad to say that sometimes the result of the experiments so made was to upset some of the claims put forward by the bacteriologists; but these results generally came too late, as in the meantime the alleged discoveries had been applied in practice. We were paying for this kind of thing in our taxes every year, and was not that a reason why we should call upon Members of Parliament to act straightforwardly with regard to this expenditure, and try to prevent money being spent for such a purpose? (Applause.) In conclusion Mr. Bryan appealed to all present to join heart and soul in the effort to put an end to the excruciating torture which was inflicted in the scientific laboratory. (Applause.)

Rev. T. J. HOSKEN seconded the motion, and spoke on the moral side of the subject. He said it seemed to him that there was nothing which so blunted moral sensibility as to be continually face to face with cruelty such as had been described that afternoon. What they needed to do was to take their stand on God's side in this matter, and so far as it became a moral question all those who were interested in a moral improvement of our fellow creatures should give the verdict in favour of the anti-vivisection side. (Applause.) The resolution was carried unanimously.

Rev. E. J. GILCHRIST then proposed "That a local society to be called the Ipswich and East Suffolk Branch of the National Anti-Vivisection Society be now formed, and a committee elected as follows:—Mrs. Luther Holden (President), Rev. W. H. Williamson, Rev. E. J. Gilchrist, Rev. J. Outram, Rev. A. A. Dowsett, Miss Youngman, Mrs. Piercey, Mrs. Griffiths, Mrs. N. Cobbold, and Mrs. Fry, with the Rev. T. J. Hosken and Mrs. Kirby hon. secretaries, and Mrs. A. Paul Ridley, hon. treasurer."

Mr. R. L. EVERETT seconded the resolution, and expressed his abhorrence of Vivisection, and, it having been supported by the Rev. A. A. DOWSETT, was also carried unanimously.

The CHAIRMAN intimated that a large number of ladies and gentlemen had already signified their intention of becoming members of the newly-formed branch, and at his invitation a considerable further number of those present came forward and gave in their names as members.

THE PASTEUR INSTITUTE IN INDIA.

The following correspondence in reference to the above Institute, named the "Victoria" in honour of Her Majesty's Diamond Jubilee, has been sent to us for publication:—

FROM SURGEON-GENERAL THORNTON, C.B., TO THE RIGHT HON. LORD GEORGE HAMILTON, M.P., SECRETARY OF STATE FOR INDIA.

MY LORD,—With reference to my letter, dated 1st of October, 1896, on the subject of Preventive Inoculation in India, I beg respectfully to draw your attention to the following statement extracted from a late number of the *British Medical Journal*:—

"PASTEUR INSTITUTE IN INDIA.

"The Maharana of Dholepore has been heartily congratulated by the Viceroy as the prime mover in the Victoria Pasteur Institute in India, and promised every encouragement. About half a crore of rupees will be required before work commences, of which twenty lacs are subscribed. The Indian chiefs are concentrating all their efforts for this purpose instead of contributing to other objects in commemorating the Jubilee."

In my letter above referred to I alluded to the danger likely to arise in consequence of the action of the Indian Government in giving encouragement and patronage to schemes for establishing Pasteur Institutes in that country, and my warning has been fully justified by the events of the past year. Disaffection has been excited in India, and there is no doubt that the action of the Indian Government in this matter is largely responsible for it. In the above extract the Indian chiefs are represented as being quite enthusiastic in favour of Pasteur Institutes, but if this is the case it is obvious that they must have been entirely misled as to the real nature of the Pasteurian anti-rabic inoculations, and of preventive inoculations generally, which would be odious and intolerable to Hindus and Mahomedans alike, if they knew what they

were. What then will their feelings be on discovering that they have been induced to give their sanction and support to a system involving what they must regard as most disgusting pollution?

It is truly amazing that the Indian Government should thus deliberately provoke disaffection in India and even run the risk of rebellion for no adequate reason whatever. Preventive inoculation has failed signally in some instances, in others there is much difference of opinion as to its efficacy, and in no case has this treatment been so successful as to afford a semblance of justification for so dangerous a step as its introduction into India contrary to the desires and feelings of the natives.

I have reason to believe that questions on this subject will be asked in the House when Parliament meets, and I would respectfully urge your Lordship to consider this matter carefully and to make full inquiry, after which I feel assured that you will deem it advisable to forbid the further prosecution of a scheme so distasteful to the vast majority of the people of India, and so dangerous to the welfare of that country and of Great Britain also.

I have the honour to be, my Lord,

Your Lordship's most obedient Servant,

J. H. THORNTON, M.B., B.A.,

Deputy-Surgeon-Genl., I.M.S. (Retired).

49, St. Charles Square, North Kensington, W.

20th November, 1897.

FROM LORD G. HAMILTON, M.P., TO SURG.-GENL. THORNTON.
India Office, Whitehall, S.W., November 29th, 1897.

DEAR SIR,—I am desired by Lord George Hamilton to acknowledge the receipt of your letter of the 20th and to say that he has made a note of your opinion as to the political danger of establishing Pasteur Institutes in India.

I am, yours faithfully, RICHMOND RITCHIE.

Surgeon-General J. H. Thornton, M.B.

DIPHTHERIA IN LONDON.

In the four-weekly period ended November 6th the amount of diphtheria notified in London was excessive. In fact it is necessary to go back to the four weeks ended December 28th, 1895, before finding a similar period having a weekly average higher than that for the four weeks first named. In the 1895 period the total of notifications including duplicate certificates was 1941 and the weekly average 485. In the period ended October 9th of this present year the actual total was 1169 (the several weekly numbers being 267, 309, 290, and 303) with a weekly average of 292. But in the four weeks ended on November 6th the total was 1336, made up of 351, 363, 319, and 303 as the constituent totals and the weekly average as high as 334 cases. In the earlier of these recent periods all save one of the sanitary areas in London were invaded; seven districts had 50 cases and upwards each with an aggregate of 469; and other 5 invaded areas had only 17 cases in all. In the later period all districts were invaded; 10 districts had 50 cases and upwards each with an aggregate of 700 attacks or more than half the total for the 43 sanitary areas; and other 10 districts had only 59 cases in all. In the earlier period the deaths registered numbered 182, or 45 weekly, and yielded a case mortality of 15.6 per cent.; but in the later period the registered deaths were 224, or 56 weekly, and the case mortality was 15.8 per cent. Thus not only has there been in London during the October–November period a heavier record of attacks of diphtheria than any chronicled since the close of 1895, but there has also been a heavier case fatality rate than in any period since May last. In the completed weeks that have since elapsed the registered deaths from diphtheria in London have been as follows: 46, 37, 63, and last week 52, the later total being 5 in excess of the corrected decennial average for the corresponding week of the period 1887–96. Of the 52 deaths last week 7 belonged to Hackney, 7 to Lambeth, and 4 each to Kensington, St. Pancras, and Lewisham sanitary areas. Five of the deaths were of infants, 31 in all were of children under five years of age, and 3 were of persons aged over twenty years. The admissions to hospital during the week numbered 147, and 1056 cases of the disease were under isolation on Saturday last in London institutions. In the Outer Ring there were last week registered 15 deaths from diphtheria, of which 6 occurred in the Edmonton union districts.—*Lancet*, December 11, 1897.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, SATURDAY, JANUARY 1st, 1898.

THE OLD AND NEW YEARS AND OUR WORK.

THE old year, which, as we write, is fast drawing to its close, has witnessed a somewhat sweeping change in the title of the Society, and the adoption of a new Constitution for its management; but there has been no alteration of its policy. The new name of "The National Anti-Vivisection Society," has proved generally acceptable, and the new rules have been brought into action smoothly and effectively. The result has been as gratifying as it has been agreeable. There were not wanting, when the change was proposed, some who expressed fears as to the result, but even those have now been reassured, and the judgment of those who foretold that none but the best results would flow from the change, is admitted to have been correct. Formerly the Society, despite its long title since its fusion with the International, was familiarly known as the "Victoria Street," and there were not wanting those who criticised the association of an Anti-Vivisection Society with the name of a street. Nevertheless, the object in view was well understood, and the name did not much matter so long as it clearly identified the Society, and that it has always done, and it may be remarked without egotism, identified it as taking the first place in the movement. Years ago people were a little startled to learn that a newspaper was about to be started, called after a London street; but when the first editor of the *Pall Mall Gazette* came to found another journal, he argued that the name did not much matter, and called it the *St. James's*. After all it does not need a Shakespeare, or even an Editor, to convey the idea that there is not much in a name. The principles adopted and the energy with which they are urged and advocated form the main element whether in a newspaper or a society, and none will ever deny, we imagine, that the Victoria Street Society struck many a resounding and staggering blow for Justice and for Right on behalf of tortured animals.

The same process is still going on, and it is a pleasant

duty to draw attention to the activity of our friends in their efforts to promote the cause in various parts of the country, as borne witness to by the reports in the "Home Intelligence" we publish in this issue of "THE ZOOPHILIST." The work of spreading information and enlightening and enlisting the public is heavy and progress may be slow, but there is plenty of evidence that our adherents are in good heart and full of enthusiasm. We are sometimes asked if the cause is advancing. During the past year several additional Branches have been formed and got to work, each of them being constituted largely of new friends who had hitherto taken no part in our propaganda. Whether we turn to Hull or Brighton, Bristol or Brixton, Bolton or Liverpool, Manchester or Ipswich, we find clear evidence of progress, and the fact must, and no doubt will, be of great value in cheering on the Society's supporters everywhere for renewed effort in the New Year.

THE VIVISECTOR IN A NEW LIGHT.

THE crime of vivisection demands a crowd of other crimes to wait upon it, and the greatest of these is hypocrisy. The untrue statement is not nearly so useful a servant to the vivisector, because sooner or later it is sure to be exposed; *benchè la bugia sia veloce, la verità l'arriva*. The statements of our candid opponents are readily disposed of. To prick the bubbles they blow as soon as they begin to float upwards is the congenial task of "THE ZOOPHILIST."

ITHURIEL's spear is not required in our office; our pen suffices to dispel the illusions, phantoms, and dreams which the demon of the laboratory whispers into the ear of the public, but our false friends are like our shadow; in the sunshine they are close to us, but we miss them the moment we enter the shade. What are we to say of a distinguished writer, the editor of a well-known ethical magazine, who says, "When I wrote against anti-vivisection I did not attempt to sing the praise of vivisection, for indeed I hate vivisection as much as any one of my critics, only I cannot join the anti-vivisectionists." Quite so. Dr. PAUL CARUS, Editor of the *Open Court*, is a fine-weather friend, he is with us in the sunshine but forsakes us in the shade. "I feel for you deeply," said a man to a beggar, and as he turned to pass aside his friend asked, "How much do you feel for him? I feel a shilling."

Dr. CARUS hates vivisection, but he will not stir a finger to help our movement. Moreover, he is careful to define what he means by hating vivisection. In his magazine a controversy has been going on entitled "Vivisection from an Ethical Point of View." Our side has been ably maintained by Mr. AMOS WATERS, Mr. R. N. FOSTER, Dr. ELLIOTT PRESTON, and Mrs. FAIRCHILD ALLEN, in the number for November, and at the close of the correspondence Dr. CARUS rejoined, commencing his reply with the remarkable words—"I find that the main point at issue has not been touched by any one of my critics." Not touched! It has been pounded into dust. "You

grossly exaggerate," says the Editor. "Exaggerate the horrors of Alfort?" replies Mr. FOSTER, "I dare not detail to your readers such unspeakable cruelty."

Dr. CARUS protests that he hates vivisection just as he hates war, operations, and amputations. It is an evil, but a necessary one. He would not have peace at any price, so he must sometimes assent to war. He would have medicine make progress, so he reluctantly assents to vivisection. But we reply that vivisection is *not* necessary. It is absurd to compare it to war or surgery. There are times when a nation must unsheath the sword or perish; there are occasions when we must lose an organ or a limb or sacrifice our life. But no such contingency arises in connection with experimentation upon animals. It never happens that a doctor has to say, "I could save my patient if I could first try an experiment upon a dog." We often hear opponents put such a case, but it is merely an *ad captandum* trick.

The vivisector seeks a new fact, clears up some obscure point, but never says, "Here is an experiment which will cure such and such a disease." War has a definite object. A surgical operation has a well-defined and legitimate purpose. A vivisection is a gambling speculation. Dr. CARUS thinks the physiologist "gladly devotes his life to the search for truth, and would be willing to die for truth if truth could be had at that price only." Dr. CARUS knows very little of the vivisector if he believes that.

Truth has nothing usually to do with the business. To upset an opponent's conclusions, snatch the laurels from a rival's brow, this is the aim of the experimenter. Was it not SCHIFF who performed a thousand experiments to prove a certain theory, and did not another physiologist perform another thousand to prove him wrong? Take the number of the *Journal of Physiology* issued in November, 1897 (Vol. XXII., No. 3, p. 204), in which Dr. S. J. METZLER says, after describing certain cruel experiments on dogs, "We have thus been able to refute the claims of the entire chain of experiments brought forward in favour of the theory that the peritoneal absorption takes place through the walls of the blood vessels, and not by way of the lymphatics. We have shown that if the method employed in HAMBURGER's experiments permits any positive conclusion, this would come out rather against than for the conclusion drawn by him. Against the experiments of STARLING and TUBBY in favour of the blood-vessel theory we brought experiments showing results just exactly the reverse of theirs." Die for truth indeed! It is not of such stuff that heroes are made. Dr. CARUS compares the vivisector with the noble heroes who have perished in the attempt to reach the North Pole. He has no sense of proportion; he should have compared him with the gold-seekers of Klondike. He thinks the experimenter of the laboratory is like the soldier who gives his life for his country. What! Mention PAUL BERT in the same breath with NELSON, or MAJENDIE with HAVELOCK?

But our hater of vivisection (with a circumbendibus) asks, "Suppose that scientists had been prevented from

making systematic inquiries on lower animals into the nature and cure of diseases such as smallpox, cholera, diphtheria, the plague, etc., what would have been the result? We should at present still be at the mercy of the terrible epidemics that sometimes swept over the world." *O sancta simplicitas!* Does the good man think that the vivisectors have delivered us from these things? Has he heard nothing of the Bombay pestilence, nor of the visitations of Worthing and Maidstone? Does he think the death-rate from diphtheria has been lessened in London since the Serumites began to practise their filthy rites? Dr. CARUS does "not deny that there are abuses of vivisection." Who told him of them but the Anti-vivisectionists, whom he cannot join? He denies "that all vivisectors are unfeeling and blood-thirsty scoundrels," and declares that "there are men among them who are more considerate than all the members of the Anti-vivisection Societies together." To be "considerate" is to be specially mindful of the claims, rights, and feelings of others. God of Mercy, if the victims of the thousand laboratories of the civilized world could judge between us and their torturers! The rejoinder of Dr. CARUS is nothing but special pleading, and a poor attempt at that. He complains that the main point at issue has not been touched by any one of his critics, and he thinks he has settled the matter when he compares the rude butcher-boy fainting at the sight of blood with the calm behaviour of the tender-hearted SISTER OF MERCY skilfully dressing the wounds of the patient she cannot help paining. We are like the butcher-boy, sentimentalists as we are; the good, kind vivisector, seeking after truth, is like the gentle nurse! The nurse has our heartiest sympathy under this gross insult, and the butcher-boy our congratulations; he is not often in such distinguished company.

DR. LEFFINGWELL ON SANARELLI'S YELLOW FEVER EXPERIMENTS.

The following letter of Dr. Leffingwell on this subject has been published in the *Boston Transcript*, U.S.A. :—

"TO THE EDITOR OF 'THE TRANSCRIPT.'

"It seems to me that the entertaining correspondence of the *Transcript* recently deserves more than a passing notice. A certain named physician in charge of a quarantine station, boldly carrying into practice what others have taught, has been making experiments upon human beings in place of animals; experiments involving torture, inflammation, delirium, and finally collapse, ending in death. All the awful symptoms of the disease, thus inoculated, he tells us he has seen 'unrolled before my eyes, thanks to the potent influence of the . . . poison made in my laboratory.' It is absurd to fancy that the subjects of these experiments knew what was done, when for the relief of some trifling ailment they submitted to the prick of a needle, and were devoted to death. If anything could add to the supreme horror belonging to such a crime, it is that disguise as a physician under which this scientific murderer did his work!

"It would be interesting to know how this bit of scientific intelligence has impressed the majority of your readers. Your correspondent, in that enthusiasm for scientific discovery which makes his contributions to your columns so often of exceeding interest, seems to me to forget for a moment the claims of humanity; for he characterized the discovery by this doctor's experiments as 'certainly a magnificent achievement.'

Yet he admits that it is murder, and that people who are somewhat vaguely referred to as 'unscientific persons,' may be 'disposed to criticise such experimentation.' Does this imply that scientific persons are not so inclined? Is it, indeed, as your correspondent bluntly tells us, 'a question' whether scientific murder be a pardonable crime? At the close of the nineteenth century have we reached a point where murder for any purpose is really a matter of ethical controversy? Must condemnation of such deeds be relegated to the despised class of 'unscientific persons'? In short, is it possible for science to put a gloss upon the most cowardly assassinations that the imagination can conceive?

"You may fancy such questions too extreme in their significance; I am not so sure but that they have pertinence to our time. The Marchioness de Brinvilliers in the guise of a nun, testing her poisons on the patients of Parisian hospitals in 1667, is one picture; the American physician watching, hour after hour, the agonies of his victims is her counterfeit presentment in 1897. Undoubtedly we are approaching a new era, full of mysterious import for humanity. The old standards of right and wrong seem to be passing away. The vivisection of animals has been pushed to its utmost limits; there are no new torments to be devised; every conceivable phase of agony has been inflicted again and again. Must science, then, be condemned to fold her hands before problems yet unsolved? What—except a certain sentiment of pity inculcated by the Crucified One—prevents science from making experiments upon those useless members of society to whom your correspondent alludes as the 'lower orders of the people'; the pauper sick, the friendless, and the outcast poor, that are always with us? May not Lazarus contribute to discovery as well as his dogs? Mysterious hints as to justifiable extremes are not wanting. In the *Popular Science Monthly* of just a year ago, one of the most distinguished vivisectioners of Massachusetts, evolving from his inner consciousness a new theological dogma, boldly proclaimed that 'God clearly gives to man every sanction to cause any amount of physical pain which he may find expedient to unravel His laws.' 'The aim of science,' says another scientific writer in the *New York Independent* of December, 1895, 'is the advancement of human knowledge at any sacrifice of human life. If cats and guinea pigs can be put to any higher use than to advance science we do not know what it is. We do not know of any higher use we can put a man to. . . . A human life is nothing compared to a new fact.' Probably both of these writers would indignantly disclaim the imputation of encouraging murder; but why was language employed of such sweeping significance? Experiments like these you publish are by no means unknown, but it is not often that they are so boldly described.

"For myself, I have no language at command sufficiently strong to phrase my opinion of a man who, in the garb of a physician, could be guilty of such a crime. I believe that such experiments would be equally condemned by the majority of the medical profession in the United States—not connected with laboratory work. But private disapproval is not enough; and at no distant day I venture to hope that the Massachusetts Medical Society, which has so strenuously opposed all legislation regulating the vivisection of animals, may, by formal resolution, set the seal of its equal disapproval upon murder as a method of scientific discovery.

"ALBERT LEFFINGWELL, M.D.

"Hamilton Club, Brooklyn, N. Y., Oct. 7."

OUR CAUSE IN THE PRESS.

CATHOLICS AND VIVISECTION.

(FROM THE "CHRISTIAN COMMONWEALTH," DECEMBER 2ND.)

A few weeks ago we felt constrained to write in terms of very frank animadversion with reference to the last chapter of a devotional book entitled "Thoughts for all Times," from the pen of Monsignor John S. Vaughan. That chapter is an essay on "Theology and Vivisection," in which he warmly supports the hideous practice of experimental torture. It is gratifying to find that many Catholics are shocked and

indignant at this hardened attitude on the part of a priest. One of these has pointed out that there is a vital difference of feeling among Catholics on this point as shown by the position of Cardinal Manning as contrasted with that of Monsignor Vaughan. The Church, says the Monsignor, while denouncing the abuse, "sanctions the use" of vivisection. "There is not to be found," said Cardinal Manning, in 1882, "a word in the great theology which I represent, no, nor in any act of the Church of which I am a member, no, nor in the lives and utterances of anyone of those great servants of that Church who stand as examples, nor is there an authoritative utterance anywhere in favour of vivisection. There may be the chatter, the prating, and the talk of those who know nothing about it." On a previous occasion, in 1881, the Cardinal denounced vivisection as "a detestable practice, without scientific result, and immoral in itself." That any follower of the merciful Christ should be capable of pleading in favour of this appalling method of prosecuting biological research is almost incredible, and not a little disheartening. Although Cardinal Vaughan has thrown his ægis over the practice by endorsing the work of Monsignor John S. Vaughan, the plea of his illustrious predecessor will have far more weight with the majority of Romanists than his own authority. It is often remarked with surprise, and even anger, that very seldom are Protestant ministers heard to utter a word of remonstrance against the savagery perpetrated in modern laboratories. There seems to be a conspiracy of pulpit and Press in reference to the doings of the doctors of science. Therefore we all the more admire the faithfulness and persistency displayed day after day through long years by the Editor of the *London Echo* in his criticism of the vivisectionists.

ON A LECTURE "IN PRAISE OF VIVISECTION."

(FROM THE "ACCRINGTON OBSERVER," DEC. 4TH, 1887.)

SIR,—I have read the report in your columns of the address given by Mr. J. H. Duxbury before the young men's class in Ernest Street School, under the presidency of my esteemed friend, the Rev. E. M. Durbin. I crave permission to offer just a brief reply to Mr. Duxbury, and I hope that shortly arrangements will be made for a lecture or debate to be held in Accrington upon this question.

(1) Mr. Duxbury is completely mistaken in thinking that vivisection is less painful than prior to 1876, the year of the Commission Report. Every class of experiment is now possible of being performed under license of English law, and the very last return of experiments made numbers 7,500, some of which are of the most terrible nature. (2) Mr. Duxbury is not helping to solve the question of man's right to vivisection animals by saying that we are cruel in other directions. To say that society is cruel in its sport, or that there is cruelty in the breeding of animals for the butcher or the fancier is surely not to justify vivisection. The humanitarian is against every kind of cruelty, and the anti-vivisectionist does not defend any of these, but neither does he defend the cruelty done in the name of science. The question is not which form of cruelty is worse, but is either of them right from a moral standpoint? I have seen animals put to death in slaughter houses, in many large cities. I have seen them vivisected by polite professors of physiology, and I am bound to declare that the butcher's method is humane compared with the lengthened tortures of the scientist. (3) Mr. Duxbury speaks of lives saved by discoveries made by vivisection. I am unaware of the instances. Mr. Lawson Tait, Dr. Berdoe, Sir Benj. Ward Richardson are among those who declare this is not the case. Professor Schiff in ten years vivisected 70,000 animals, 14,000 of whom were dogs. The late Dr. Carpenter, in reply to a question put to him by Miss Frances Power Cobbe, admitted that the results of Schiff's dreadful experiments were of such a character as only to be understood by a physiologist. Professor Claude Bernard (in whose school of medicine I have stood and witnessed the instruments dripping with the blood of their day's victim), after a long life spent in experimentation, said the vivisectioner's mouths were full of promises, but his hands were empty of results. Disease is the result of ignorance, crime, selfishness, intemperance, impurity. Let society conquer these, and disease will in

time be removed, but even though in the future, as in the past, millions of animals be tortured, escape will not be found from the consequences of human folly and wrong, and even though we cease as useless our cruelty to the lower animals, and commence to vivisection the higher animal, man, as is now proposed, these, too, shall deceive us, because we are searching for health along the wrong track, namely that of scientific theory rather than that of conduct and obedience to the higher laws of our nature.—Yours truly,

T. A. WILLIAMS.

Bristol, Nov. 29th, 1897.

ANTI-TOXIN.

(FROM THE "ECHO," LONDON, DECEMBER 13TH, 1897).

SIR,—The *British Medical Journal*, of November 27th, announces that the Metropolitan Asylums Board has decided to arrange for a continuance, for a period of seven years, of a supply of anti-toxic serum from the laboratories of the Royal College of Physicians and Surgeons. Now, whatever opinion one may hold as to anti-toxic serum, and whatever opinion one may hold as to the propriety of having treated the patients in the Asylums Board Hospitals with a medicament considered by many to be dangerous, there can be no doubt whatever that the proceeding, if indeed the *British Medical Journal* is rightly informed, is a most foolish and absurd one for the duration of a belief in new drugs is often very short; long before the seven years have elapsed, the advocates of anti-toxin serum may speak of it with the contempt and shame with which Lord Lister now speaks of his spray. Only the other day Dr. Playfair declared that of the antiseptics in midwifery cases which are recommended in his book published eleven years ago there "is not one of them which I should recommend now as a thoroughly reliable antiseptic." With such unanswerable proofs before it of the short-lived reputation of medicaments and treatment, one can but hope that the *British Medical Journal* has been misinformed, and that the Metropolitan Asylums Board has not come to any such absurd and improvident decision.—Your obedient servant,

A. GOFF.

HOME INTELLIGENCE.

LONDON AND DISTRICT.

Mr. R. S. WOOD AT WIMBLEDON.

Mr. R. S. Wood, M.A., lectured to a large audience at the Radical Club on Sunday evening, November 28th, on "Vivisection and Hospital patients." Mr. W. Barker occupied the chair.

Mr. Wood first dealt with the Vivisection Act, which he described as most unsatisfactory. The lecturer contended that the only possible outcome of the vivisection of animals was the vivisection of human beings, since the effects which experiments produced on animals were by no means the same as upon men. As an instance of what might be expected, he might tell them that Professor Sanarelli had, in America, actually inoculated human beings with the virus of yellow fever with the result that they all of them died. In his opinion the Professor ought to be tried for murder, and, if convicted, hanged. Human vivisection also certainly went on in the London and provincial hospitals. Dr. Sydney Ringer, writing in a medical work, described experiments which he performed on eighteen adult out-hospital patients with nitrite of soda. In no case was the medicine at all suitable for the complaint, and the effects—which Dr. Ringer went on to describe—upon the patients, were most painful. It was perfectly monstrous that hospitals where sick persons had to go in their hour of need, should be used by the doctors to experiment in order to learn their trade. Mr. Wood then went on to quote from Dr. Ringer's book, and to describe experiments made by that gentleman in administering large quantities of pure alcohol to a healthy boy (shame). Quoting from the *British Medical Journal*, Mr. Wood gave particulars of a case in which a patient had been kept for many days suffering from a very painful skin disease simply for the purpose of showing students that the complaint could not be

cured by natural means. The lecturer concluded by an eloquent appeal to his audience to study the matter for themselves, and if they found the facts as he had stated them, to agitate to put an end to such a state of things.

BRADFORD.

At the Labour Church, Peckover Street, on Sunday evening, December 12th, Mr. T. A. Williams, of the National Anti-vivisection Society, delivered an address. He said that the reformer and the religious man were each in their different ways working to remove wrong from the world. Animals were also in need of help, having nerves to feel and suffer, and everything that lived should be exempt from torture. Vivisection was the worst form of cruelty in our midst to-day, and would not be tolerated by any truly refined or humane people. Mr. William Humphreys presided, and conducted the devotional exercises.

MEETING AT BRIGHTON.

A public meeting, under the auspices of the Brighton Working Men's branch of the London Anti-Vivisection Society, was held on November 25th in the St. Luke's School-room, Queen's Park Road. There was a good attendance.

The Rev. W. N. P. BEEBE, who presided, read several letters apologising for non-attendance. Councillor McClean, in his letter, said he could not understand how his fellow-workmen in Brighton could remain so apathetic on that subject, but he believed that there would be a great awakening, and that with one united effort the foul practice of vivisection would be driven from the land; while the Rev. A. J. Gibson also expressed the hope that something would be done speedily to stop the dreadful practice.

The CHAIRMAN said they could look on that as an indignation meeting, as they were there to protest against a horrible and degrading practice. (Applause.) It was not done in the public view, and was a refined kind of cruelty, although done in the name of so-called science. The practice could not be too strongly condemned, and it was horrible to think of the tortures inflicted on innocent creatures. They needed to rouse public opinion, and there could be no doubt that when the heart of the nation was made to beat, vivisection would be stamped out. (Applause.)

Mr. T. A. WILLIAMS said the trend of modern thought was in the direction of humanitarianism, and people were realising more and more that animals had rights, and one of their rights was exemption from torture. (Applause.) They laid down the proposition that even in scientific research cruelty was wrong, and it had been condemned by great and good men and women of every school of thought. (Applause.) It was always right to be true and gentle and merciful, and they must be so even if they were called faddists and sentimentalists. He was glad to know that the anti-vivisection movement was spreading in Brighton, and they were fortunate in having Mr. T. H. Russell as hon. secretary, and it was to be hoped that the committee would have greater financial and moral support. Mr. Williams went on to describe an experiment on a dog which he had seen in Paris, and he denied that such cruelties could be justified on any ground whatever, and asked, did they know of a single disease which medical men had been able better to cure as the result of vivisection? He had put that question in public and in private, and had never succeeded in getting a direct answer to it. Thousands of animals had been tortured to find out remedies for disease, as was said, and yet though the vivisectioners' mouths had been full of promises their experiments had been empty of results. The Bishop of Durham had truly said that "the avenues of knowledge cannot lie along that line." (Applause.) It was estimated that a million experiments were made every year, and when he contemplated the vast amount of misery caused, and thought of the absence of results, he could only conclude that the great God of all would not allow good to come out of evil. He quoted Professor Huxley to show that vivisection was a scientific error, and denounced it as the meanest crime in human society. The truth was there could be no conflict between morality and true science. (Applause.)

Mr. CHARLES L. MONEY, in moving a resolution condemning

vivisection and calling on Parliament to pass a Bill making it illegal, said he could admit no force in the plea of utility. (Hear, hear.) These infernal rites on the altar of evil could not in any way be excused, and let them do everything in their power to sweep away that inhuman system which was so degrading. Having condemned Pasteur's methods, he said it seemed to him that cruelty was the great sin which contained all the varied machinery of human error; they looked on the idea of the Enemy of Mankind as a remorseless fiend incapable of feeling. Would that they had the voice of a Knox or a Wilberforce, or the dauntless chivalry of a Sir Galahad or an Arthur to rouse the conscience of the nation and drive away these diabolical tortures. (Applause.)

The Rev. R. B. WHITEWAY, in seconding, said they would never get anything in this country unless they made themselves a nuisance. (Laughter and applause.)

The motion was carried unanimously; and, on the motion of Mr. RUSSELL, it was decided to send copies to the Borough Members.

BOLTON.

A Drawing-room Meeting, under the auspices of the Bolton Branch Society, was held at Rivington Hall, near Chorley, by the kind permission of J. W. Crompton, Esq., J.P., and Mrs. Crompton, on the 3rd of December.

Mr. CROMPTON presided, and remarked that he had long supported the Royal Society for the Prevention of Cruelty to Animals, and as he considered vivisection was one form of cruelty, he opposed it on that ground.

Mrs. HERBERT PHILIPS read a paper on "Vivisection: what it is, and what it involves," and after explaining the conditions under which it is practised in England, and the report of the Royal Commission, leading to the passing of the Act, she described certain cruel experiments and also a visit to the Pasteur Institute. Inspection, she said, was a delusion, one inspector having petitioned for further powers for experimenters! Attempts to delude the public were made by describing as "painless," horrible experiments, which was the only phrase proper to designate one by Messrs. Bayliss and Hill, put down in the report, under that head. The increase of vivisection, the practically free hand of the vivisectors, the danger to hospital patients, were all dwelt upon, and Mrs. Philips pointed out that the records of medical journals at once refuted the statements that there was no cruelty in English laboratories. She concluded an able and stirring address by denouncing the practice as cruel, treacherous, and morally degrading, and asserting that every claim made for it had broken down on investigation.

The Rev. B. DAVIES moved "That this meeting hereby expresses its conviction that Experimental Vivisection should be prohibited by law, as it involves the infliction of cruelty upon helpless dumb animals, and deadens the humane instincts of operators and observers alike; and that the cordial good wishes of the meeting are extended to the efforts of the Bolton Anti-Vivisection Society to awaken active interest in the question," and gave it his warm support, being of the opinion that no helpful discovery had been made by Vivisection.

The Rev. SAMUEL THOMPSON seconded, and condemned, both on moral and scientific grounds, the use of the living body for experiments.

The Rev. P. WRIGHT supported, and thought the tendency must inevitably be to harden. The resolution was carried *mem. con.*

A vote of thanks to Mrs. Philips, and to Mr. and Mrs. Crompton, was moved by Mrs. THOMASSON, who suggested that thanks should also be given to the Hon. Secretary, Miss M. E. Wolfenden, for her help to the Cause, in Bolton. The Rev. R. C. MOORE seconded, and though not altogether convinced of the necessity for total abolition, he deprecated lecturing experiments. The Rev. C. J. STREET supported, and with the Chairman's reply, a very successful meeting was brought to a close.

MEETING AT HOVE.

A public meeting in connection with the Brighton and Hove Branch of the London Anti-Vivisection Society was held on

Dec. 3rd in the banqueting room at the Hove Town Hall. The Rev. W. N. P. Beebe presided, and among those present were Mrs. Firmstone (Hon. Secretary of the Society), Mrs. Boulton (Hon. Treasurer), the Rev. Lionel Lewis, the Rev. Seymer Terry, and Mr. R. Somerville Wood.

The CHAIRMAN, referring to the saying that one half of the world did not know how the other half lived, said it was perhaps equally true that one half of the world did not know how the other half died—and this was certainly true of the dumb creatures which met their death at the hands of the vivisector. The law punished open and flagrant cruelty. Yet the law allowed the most horrible cruelties to be practised in private on innocent animals. He hoped they would learn all that was to be learned on that subject, and so endeavour to influence public opinion that it would be no longer possible to carry on these dreadful practices, which made people who were naturally kind, hard and cruel. They should not rest till vivisection was swept for ever from the land. (Applause.)

Mr. SOMERVILLE WOOD said he was there to protest against all forms of cruelty, and especially against cruelty that was sanctioned by the State. He defined cruelty as pain inflicted on any sentient creature which was not for that creature's immediate benefit, and he held that the plea that a great amount of good was done by vivisection utterly fell to the ground. They had the authority of St. Paul that they must not do evil that good might come of it. God gave these creatures life that it might be a blessing to them, and the vivisectors turned that blessing into a curse. He was sorry to harrow their feelings, but he must quote a few cases of cruelty. Mr. Wood then quoted a number of cases and added that such abominations were possible in spite of the fact that the distinguishing mark of the Victoria Cross was the growth of humanitarian principles, and a professor with a number of letters after his name could commit atrocities which would be a disgrace to a coster. He then commented on the increase of vivisection under the so-called restrictive act.

The Rev. LIONEL LEWIS, and others, also addressed the meeting, which was entirely unanimous on the subject, Mr. Lewis declaring that it was arch-blasphemy against the Creator to believe for a moment that He, the merciful God, so locked up His secrets that they could only be discovered by cruel and vile experiments on dumb animals. (Applause.)

HULL.

On Tuesday night, November 30th, Mr. T. A. Williams, who was engaged on a lecturing tour in Yorkshire on behalf of the Society, gave an address in the Granville Hall, Silvester Street. Mr. JAMES NEEDHAM presided, and introduced the lecturer. Mr. WILLIAMS urged that vivisection was cruel to the animals, useless to science, and led to experiments upon human beings. Mr. McISACK proposed: "That this meeting records its protest against vivisection, and pledges itself to the utmost to create public opinion against it until a bill shall be passed through Parliament to prohibit the practice." Mr. COOKE seconded the proposition, which was carried.

On December 1st, a meeting was held in the Mission Hall, Pease Street, to hear an address from Mr. T. A. Williams. The Rev. J. W. SLEIGHT presided over a large attendance, and in introducing the lecturer said he was glad to welcome Mr. Williams in their midst, for that gentleman was well known in Hull as a most eloquent speaker on behalf of dumb animals. It was the duty of every Christian person to do all they could to prevent the torture of living creatures.

The LECTURER having delivered his address, Mr. WHAITS, in moving a resolution, said they had had the question put before them in a very able manner. He wished Mr. Williams every success in his work of educating their minds upon this important question. He moved "That this meeting pledges itself to aid the anti-vivisection movement by every means in its power."

Mr. PENNOCK seconded, supported by Mr. FOSTER, and on being put to the meeting the resolution was carried unanimously.

A hearty vote of thanks was accorded to the lecturer, who promised to address a meeting at a later date, and to form a branch of his society at Hull.

LEEDS.

Mr. T. A. Williams, on behalf of the National Anti-vivisection Society, was addressing meetings, distributing literature, and otherwise promoting the cause in this city about the middle of December. Meetings were addressed at the Market at Woodhouse Moor, and the York Road Schools; at the "Christian Endeavour" in connection with the Chapel at Burton Street, Kirkstall Road and the Friends' Cross Street Mission School.

On leaving Leeds Mr. Williams proceeded to Halifax.

LIVERPOOL.

VIVISECTION AND ITS CRUELITIES.

Under the auspices of the Liverpool Branch of the National Anti-Vivisection Society, on Monday evening, December 6th, a public meeting was held in the large Hall of the Young Men's Christian Association, Mount Pleasant, when, under the Presidency of Mr. Samuel Smith, M.P., several interesting addresses were delivered.

The CHAIRMAN, in opening the proceedings, referred to the awful suffering inflicted on living animals in the name of science, which, he said, made one aware of facts which one would rather be ignorant of, although it brought one into seeming opposition to a noble profession, a large part of which justified vivisection. It was not, however, the first time that the professional conscience needed to be corrected by the wider conscience of mankind, and it was not the first time that truly good and pious men had reconciled themselves to practices which the conscience of mankind had afterwards pronounced to be immoral. He was glad to think, however, that not a few eminent men denounced the practice of cutting up alive cats and dogs in the name of science; they denied any real gain accrued to medical knowledge, or if there was a slight gain it was more than counter-balanced by the hardening of the moral sense. (Hear, hear.) The public were very much in the dark as regarded these experiments. They were informed that, as a rule, they were performed under anæsthetics, and caused the animal no pain. So far from this being the case, many of the most painful were performed without anæsthetics, because their effect could not be ascertained unless the animal retained consciousness and sensation. He was afraid that experiments of this kind were rapidly increasing, and that the Act which was passed to regulate vivisection was little more than a dead letter. The speaker gave several examples of terrible cruelty which had been practised, and in conclusion said that they demanded a fresh inquiry into the whole subject with the light gained since the last Royal Commission. (Hear, hear.) He was informed that centres of vivisection were rapidly increasing all over the country, and that the hardening effect upon young students was lamentable. He knew, as an undoubted fact, that in France, Italy, and other European countries, where the law did not interfere, the cruelties perpetrated on dogs, horses, and other highly organised animals were sickening; they were a repetition of Dante's Inferno. They had sadly debauched the public conscience, and almost destroyed sympathy for the sufferings of dumb animals. In this country matters were not nearly so bad, but the practice was growing fast, and its fruits would be the same here as elsewhere. Few things were more contagious than cruelty. It was noticed that men in war would do things they were ashamed of in peace; it was not impossible to turn men into demons. He had read accounts of Vivisections which seemed to him diabolical.

The Rev. THOS. PERKINS moved a resolution to the effect "That, in view of the fact that there is good scientific authority to prove the practice of vivisection to be useless, and seeing that it is morally indefensible, this meeting advocates the prohibition by law of the practice of experimenting upon living animals." In the course of his remarks he said that in this experimental knowledge there was a higher law, which stepped in and bade them stay their hands. They might experiment in dead matter, but when they came to living creatures then morality said so far you may go but no further. (Applause.) The object of vivisection, he said, was not always to benefit humanity, but they had another object—to benefit themselves. (Hear, hear.)

Mrs. ALLAN BRIGHT, in seconding the resolution, controverted the alleged statements—first, that the discoveries made by means of experimental vivisection were commensurate with the sufferings they entailed, and that the vivisectionists with superior conscience and brain power were justified in inflicting on the lower half of the creation repeated, sustained, and ingenious suffering, even when that suffering had for its object not only the pursuit of science, but also the ultimate benefit of the human race. (Hear, hear.)

Dr. BERDOE, in supporting the resolution, gave a full and interesting exposition of the theory of vivisection, pointing out that it was the cult of cruelty. (Hear, hear.) Vivisection was a cancerous growth of the noble medical profession, and the reason a majority of them consented to it was simply through the *esprit de corps* which existed amongst them. (Hear, hear.) He gave the opinions of a number of scientists on the subject, and also examples of the terrible atrocities which in other parts of the world had been committed by vivisectionists in pursuing their experiments. He argued that everything that had been gained by the practice of vivisection could have been achieved by other means, quoting numerous examples from medical journals in support of his argument.

The Rev. T. A. HOWARD also supported the resolution, which was carried unanimously, and the meeting concluded with a vote of thanks to the chairman and other speakers, proposed by the Rev. E. N. HOARE, and seconded by the Rev. T. A. HOWARD.

MANCHESTER.

On November 25th a meeting was held in the Parish School-room at Gorton, near Manchester. The chair was taken by the Rector, the Rev. J. E. Mercer.

The Rev. T. PERKINS, addressing the meeting, explained what was meant by vivisection, and gave a sketch of its history. He said that the crusade against it was preeminently a moral one, and one which it behoved all Christians to join; to seek knowledge by cruelty was not the way to succeed, and if any apparent success should at any time attend this method of research it would be outweighed by the suffering caused to the lower animals to whom we owed so much gratitude for their services and affection. He pointed out that hitherto little had been discovered by vivisection, and that it was practised by vivisectionists chiefly with the object of advancing their own reputation. He finished by appealing earnestly to those present not to let the matter drop, but to spread the knowledge of this frightful evil among their friends, and to bring their influence to bear on their representatives in Parliament in order to put an entire stop to vivisection.

The CHAIRMAN then enforced some of the points made by the speaker, and emphasized the moral aspect of the question. He also declared his belief in the continuity of life from the evolutionary point of view, and the claim upon us thus constituted by our relation to the lower animals.

Dr. WEBB also addressed the meeting, and in a forcible speech declared his sympathy with the Anti-vivisection movement, and with the main contentions of the two previous speakers, especially from the "moral" aspect of the question.

Votes of thanks brought to a conclusion a meeting which, though small in numbers, has given an impetus to the cause in yet another large centre of population.

The Broughton Auxiliary held two public meetings in November. The first, on the 6th, was held in connection with the Sussex Street Wesleyan Chapel, and was attended by about sixty adults. Mr. Cox, M.R.C.V.S., gave the address. The second was held on November 18th in St. Clement's Lecture Hall. The Rev. W. T. Stonestreet presided, and J. W. Graham, Esq., M.A., gave an address. There were seventy present, and a resolution was passed in favour of total prohibition of vivisection.

On Monday evening, December 13th, a lecture was given on "Vivisection: What it is, and what it involves," by Mr. Herbert Philips to a Young Men's Society at Fallowfield, Manchester. No resolution was passed as the subject was new to the audience, but interest was shown and the lecturer requested to follow it up on a future occasion.

MIDDLETON, LANCASHIRE.

A meeting in opposition to the practice of vivisection was held in the Sadler Street School, Middleton, on Wednesday evening, December 8th, presided over by Councillor Townend, and addressed by Mr. T. A. Williams, lecturer to the Bristol and West of England Anti-vivisection Society, on "Vivisection: a Cruel and Useless Crime."

MR. WILLIAMS referred to vivisection as a system of cruelty, and cruelty was a very dreadful thing. He considered that the torturing of these animals was unjustifiable. Of course they would be told that it was in the interest of scientific knowledge that this thing had been going on, and that under the present law of England they were allowed to experiment on living creatures. In 1896, the last year for which they had any returns, 7,500 animals were experimented upon. It would be a great source of interest to them if they made themselves acquainted with the question. The medical profession said that these experiments were necessary, but he (the lecturer) denied that. The late Lord Chief Justice of England said that in building up their knowledge they ought not to cause cruelty, and in the interests of humanity he (the speaker) asked them to assist in the prohibition of this practice. During the reign of the Queen knowledge of almost every description had made rapid strides, and he thought that all things considered the discovery of chloroform was the greatest. The lecturer went on to show that vivisection was of no advantage to patients, and at the close a resolution protesting against vivisection was passed on the motion of Mr. H. HILTON, seconded by Mr. S. LAW.

THE SCOTTISH SOCIETY.
MEETINGS IN GLASGOW.

The first of the monthly prayer meetings for the season was held in the Protestant Alliance Rooms, 12, Argyll Arcade, Glasgow, on Tuesday, 7th December, when W. C. Maughan, Esq., presided and conducted the meeting.

A meeting was held at 20, Bank Street, Hillhead, Glasgow, on Thursday, 16th December. W. C. Maughan, Esq., J.P., President of the Glasgow Branch, took the chair, and there was a good attendance. The Rev. F. L. Armitage, of Edinburgh, delivered an address on the question, "Were the constitution and functions of the lower animals such as would lead to helpful conclusions in relation to the human body?" The Revs. Dr. Kerr, J. A. Smith, and J. W. Mitchell, and Colonel Waterston also took part, and a number of questions were put and answered on the subject under discussion.

MEETING IN EDINBURGH.

A meeting was held at 4, Neville Street, Edinburgh, on Tuesday, 14th December. General Grant presided, and there was a good attendance.—The Rev. Jno. Baird, after referring to several matters of local interest, delivered an address on the present position of the Anti-vivisection Movement.—The Revs. Mr. Armitage and Wm. Allen, Colonel Waterston, and others, also took part, and a number of questions were put to the speaker.

At all the meetings there was a large distribution of literature.

OBITUARY.

THE REV. J. E. CRAVEN.

The Society during the past month has lost two warm supporters of the Anti-vivisection Movement. The death of the Rev. J. E. Craven, formerly Minister of Newhills, near Aberdeen, died in Edinburgh in the early part of December. The deceased was one of the oldest ministers of the Free Church of Scotland, having been ordained to preach in 1843. He was educated in the Royal High School and University of Edinburgh; he became Minister of the Free Church of Newhills in 1845, and for a long series of years laboured in that district with great acceptance. He retired from active work some years ago and came to reside in Edinburgh. Although he never took a prominent part in the Anti-vivisection Movement he warmly sympathized with it and embraced every opportunity to advance the interests of the Society.

MISS E. J. LOCKHART.

Miss Emily Johnstone Lockhart died at the residence of her parents, Mr. and Mrs. D. Lockhart, Ravelstone, 37, Albert Drive, Pollokshields, Glasgow, on the afternoon of the 4th December. There are no warmer supporters of the Anti-vivisection Movement in the West of Scotland than Mr. and Mrs. Lockhart, and in all their efforts they were ably supported by their daughter. She was always ready to do anything in her power to advance the interests of the cause, and may be said to have been forward in every good work. She was an eminently Christian young woman, and it will be difficult to supply her place.

The Committee deeply mourn the loss of these friends and wish to express their deep sympathy with the mourning relatives in their hour of trial.

J. H. W.

FOREIGN INTELLIGENCE.

UNITED STATES.

We regret to learn through the medium of the *Journal of Zoophily*, that a great sorrow has fallen upon the associate editor, Mrs. Lovell, in the death of her husband, which occurred on October 14th. "The greatness of the loss to her" it is added, "can hardly be realized by those who did not know him well, and who were not aware of his most estimable qualities. He was exemplary in every relation of life, and was greatly beloved by all those who came into contact with him. Though not personally active in Mrs. Lovell's temperance and humanitarian work, he sympathized with her warmly, and aided her as far as was in his power by money, advice, and the counsel which his good common sense and judgment dictated. The loss is to her, as we have said, an irreparable one, and she has our deepest sympathy in this hour of trial."

The *Journal of Zoophily* also reports that a sensation has been caused in Denver, Colorado, by the vivisection of a cat by the physical instructor of the Young Men's Christian Association before a class of seventeen boys, ranging in age from twelve to sixteen years. The matter has been taken up by the Humane Society, and Secretary Whitehead, according to the account that has been sent to us in the *Denver Republican* is conducting an investigation of the affair.

Our very able and watchful contemporary *Anti-Vivisection* announces the change of its name to "*Our Fellow Creatures*," beginning with the first issue of the New Year. The new title does not so clearly denote the object as did the old one, and we forbear to congratulate our good friends upon it till we hear that it does not lead to confusion.

Anti-Vivisection for December announced another fine auxiliary, and went on to recount that Mrs. Julia Langdon Barber, of Ardsley Towers, Ardsley-on-the-Hudson, and Mrs. Sarah Leggett Emory, of "Sunny Crest," Irvington-on-Hudson, both members of the Illinois Anti-Vivisection Society, have inaugurated a very active crusade against vivisection, their efforts being chiefly confined to their own state and consisting of a very large distribution of literature. Their work has received the cordial approval and assistance of moneyed people in that locality, the contribution to their "Anti-Vivisection Literature Fund" having been cordial and generous.

STATUE TO PASTEUR AT MELUN.—The *British Baker and Confectioner*, of December 11th last, announced that on Sunday, 28th November, a statue to Pasteur was inaugurated at Melun, the special object of which is to commemorate the discovery of anthrax vaccine, made by Pasteur at Pouilly-les-Fort, near Melun. The monument takes the form of a bronze bust of Pasteur, on a stone pedestal. There are two bas-reliefs. One portrays a scene of inoculation by the deceased scientist, and the other a shepherdess followed by a lamb. What connection there is between baking and confectionery and Pasteur's nostrum for anthrax, we are at a loss to conceive!

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The object of the Society is to awaken the conscience of mankind to the iniquity of torturing animals for any purpose whatever; to draw public attention to the impossibility of any adequate protection from torture being afforded to animals under the present law; and so to lead the people of this country to call upon Parliament totally to suppress the practice of Vivisection.

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THE ZOOPHILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 10.]

LONDON, FEBRUARY 1, 1898.

[POST FREE, 3d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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"SO FAR THESE INOCULATION EXPERIMENTS HAVE BEEN DEVOID OF ANY RESULTS SAVE THOSE SO DANGEROUS THAT ON THE GROUND OF THEIR RISK ALONE I SHOULD HAMPER THEM BY EVERY KIND OF RESTRICTION."—MR. LAWSON TAIT, in a letter in "*The Times*," November 8th, 1892.

NOTES AND NOTICES.

THE supply of *The Story of Karo* for free distribution is now exhausted.

WE report in this issue another failure of the Pasteurian method to save life. Particulars of the case will be found in our Foreign Intelligence.

WE observe from the *Medical Officer's Supplement* to the *Annual Report of the Local Government Board*, 1896-97, that the total of cases of diphtheria returned in London in 1896 was 13,373. The deaths numbered no fewer than 2,683, or slightly more than 20 per cent. Surely there is no evidence of any beneficent action of a marvellous anti-toxin here.

THE Anti-Vivisection Cause has gained nothing by the return of Lord Charles Beresford, the fire-eating naval officer, for York. According to the *Morning Post* (Jan. 12th), he—

"With emphasis declined to support any scheme for the total abolition of vivisection, which he believed was regulated by Government, and was conducted under most humane conditions, and to have been instrumental, in the hands of skilful surgeons, of saving the lives of hundreds of men and women." Letters have been obtained from the hon. and gallant

member to a similar effect. He had been well instructed by the pro-vivisectionists apparently.

WE learn from the *Transactions of the British Institute of Preventive Medicine* that the Institute "aims to be similar in character and purpose to the Institut Pasteur in Paris," "Dog hell" and all, we presume? The *British Medical Journal* is glad to learn that it is hoped that the new building at Chelsea will be ready for occupation in the early part of this year.

CARDINAL GIBBONS has joined the new Maryland Anti-vivisection Society. The Cardinal is at the head of the Roman Catholic Church in the United States. "His influence" (a correspondent writes) "with the Catholics is unbounded; and they form a very large portion of the community in those parts. Maryland is their stronghold in the States, so now we may count every Catholic as an Anti-vivisectionist."

THE leading members of Johns Hopkins University, which is the hot-bed of vivisection, worse than any other in America, appear to be frightened at the progress of the new Society and have tried conciliatory approaches to the President. They have proposed a dinner and an amicable talk and explanation of the utility of scientific research. But the gentlemen who have founded the Maryland Society, Mr. Houghton, Mr. Macnamara, and others, find no particular attraction in the idea of dining with tormentors, and answered practically "No Compromise." They "want no contact with men of such work, but only to show them up, fight them in the courts of law, and, if it please God, stop their devilish cruelties for ever."

IT gives us much more pleasure to state on the authority of Dr. Edward Haughton, the Medical Officer in charge, that a patient treated at the London Buisson Institute, Upper Norwood, is alive and well. The patient was James Crumpler, twice bitten by different dogs, and twice treated. The date of the first bite was the 31st October, and of the second, the 3rd of December, 1897. Both dogs were officially certified as "rabid." Crumpler is a keeper in the Dogs' Home, where he and his *confrères* ought to wear gloves in handling the dogs but have often omitted to do so.

IN our Foreign Intelligence will be found what we have termed "A powerful and pathetic appeal" to the Prussian Minister of Education. This appeal was composed and penned by Frau Vilma Parlaghy, a well-known German portrait-painter, who has marshalled the arguments against vivisection in such a fresh and forcible manner that they will be perused with interest.

We trust they may have had something, at least, of the desired effect on the mind of the statesman to whom they were addressed.

OUR readers will not have forgotten "Mr. Haweis and the hydrophobia fly" and the protests made by certain scientists that no danger was to be apprehended from insects assisting in the research work of the Institute of Preventive Medicine. The *Medical Press* of January 5th contains the translation of an article from *La Revue Scientifique* on "The Rôle of Insects in the Propagation of Disease," which throws new light on the subject. Some disgusting experiments have recently been performed with bugs and typhus fever. "Fasting bugs" were applied to the skin of patients and monkeys suffering with typhus and they were proved to have inoculated healthy monkeys with the disease.

MR. ROSS, in India, states that he submitted to the bite of a mosquito a patient in whose blood crescents existed, and he found that the crescents very soon transformed themselves in the stomach of the insects.

"Mr. Ross conducted the following experiment to decide whether water polluted by infected mosquitos can serve to transmit paludism (marsh fever). He got a man to drink a small quantity of water in which a couple of mosquitos gorged with paludal blood had died after depositing their eggs. Eleven days afterwards the man had headache, lumbago and fever. . . . The fever lasted three days. . . . Mr. Ross repeated this experiment several times on Indians without being able to produce paludal symptoms of definite character."

There seems to be conclusive evidence that flies may transmit the bacillus of tuberculosis and of cholera. The utter disregard of the welfare of human victims of experiment is a prominent feature in bacteriological investigation.

THE Archbishop of Canterbury, preaching to the students at the London Hospital on January 12th, said that "the progress made of recent years had been very great, and by it an astonishing amount had been done to alleviate pain; yet to posterity, the progress now made might appear very little despite its seeming advance." We think it highly probable that posterity will think very little of the results of our present rage for experimentation, and hold our "seeming advance" very cheaply indeed.

WE now know, from letters which have appeared in the press, and which we reprint in our own pages, what took place in regard to vivisection on the occasion of the last apportionment of the Metropolitan Hospital Sunday Fund by the Mansion House Committee. It appears clear that the Lord Mayor ruled out of order an effort to get a distinction made as against pro-vivisection Hospitals, or an expression of opinion on the subject. The public confidence in the administration of these funds, already severely shaken, will, we fear, be further weakened by this incident, so that it may well be expected that hereafter needy hospitals will become even more necessitous than before. Why could not the Mansion House Committee see the wisdom of setting their house in order and introducing a much-needed reform before it is too late?

THE *Practitioner*, one of our old-established and most orthodox medical magazines, has told the story of

Professor Sanarelli's experiments with the bacillus of yellow fever without a word of remonstrance against his murderous doings. Of the deadly bacillus the Editor says (December, p. 632)—

"In the dog especially [it] gives rise to a disease closely resembling human yellow fever. The cat is very resistant, while the horse is extremely sensitive. . . . Injected into man in small doses, the filtered and sterilized cultures produced typical yellow fever."

DR. G. VIVIAN POORE has an article in the *Practitioner* for January on "Germicide Remedies," in which he says—"It is not so many years ago that mercury was dislodged from its pre-eminent position by the laboratory worker, who found out that we were wrong in considering it a cholagogue [*i.e.* a stimulant for the biliary secretion], and for a time the man who gave a dose of calomel was regarded as a mediæval Goth." This refers to the well-known story of Professor Rutherford's experiments on dogs and how he misled the medical profession in consequence. Dr. Poore continues—"Now, however, we have discovered that its great value as a purgative is due to its strong antiseptic power." With all deference to Dr. Poore, we take leave to say we do not hold this theory in higher estimation than the exploded one of Rutherford.

THE *Practitioner* tells an amazing story of animal experimentation in the January number, in giving the history of Sir Thomas Smith's case of hydrophobia at St. Bartholomew's Hospital. The patient was bitten by a dog in the ear. The dog at the time of biting the patient was sent to a veterinary surgeon and poisoned. Now comes the astounding story that inoculation experiments on three rabbits from the disinterred carcase of the dog gave negative results; one died of septic infection at the seat of inoculation, which is just what we should have suspected, and the other two are still alive, which is surprising; but, says the *Practitioner*, "There is, however, some doubt as to whether the body of the right dog was sent for examination." The poor man died, and twenty-four hours after his body was rapidly decomposing. Rabbits were inoculated from his spinal cord. Fourteen days after one rabbit died of paralytic rabies. Prodigious!

IN the *Lancet* of the 8th January, Dr. W. T. Brooks, of Oxford, reported in detail "a case of tetanus successfully treated with anti-toxin." A lady met with an accident while riding a cycle on the 9th of September. Ten days later she manifested symptoms of lockjaw. On the twelfth day (September 21st) she was injected with Pasteurian tetanus anti-toxin. The injections were repeated daily, but the patient grew worse and suffered severely up to the 28th. She seemed then to have passed the height of the attack and began slowly to recover. Although this is claimed as a successful case of anti-toxin treatment, it seems on the face of it, according to the medical man's own showing, one of natural recovery. The injections of anti-toxin not only had no effect for a week, but under them the patient grew worse. Yet the claim is made of success for the anti-toxin. The grounds, however, on which it is based do not warrant anything of the kind.

IN this connection we may appropriately refer to a statement by M. Nocard recorded in the *Farm and Home* for December 25th, a copy of which a correspondent has kindly sent us. M. Nocard, who is a great French

veterinary, while approving the anti-toxin treatment, is reported to have said—

"For the moment we must give up hope of curing pronounced tetanus. Treatment by injections of anti-tetanic serum, however, is the most rational, although it has little effect upon the disease. Acute cases are almost always fatal. The only cases of tetanus for which a cure can be hoped for are those which have a slow course; not that all chronic cases can be cured; far from it, but it is only among these last that a few cases of recovery are observed."

So much, then, for one of the claims of "the new medicine" based upon experiments on animals.

THE Medical Department of the Local Government Board made a mighty effort last year and published two Annual Reports in the course of one twelvemonth. We noticed the first published *Report* (1895-96) in our issue for December, and the second—that for 1896-97—came out in the same month. Whether this "hurrying up" be due to the principal medical officer, now Sir Richard Thorne Thorne, having been knighted, or to some other influence, we are not aware; but the *Report* is certainly out unprecedently early. The *British Medical Journal* (January 1st), in reviewing its scientific contents, said, "The scientific investigations comprise the results of some inquiries of great scientific and practical importance." We confess we do not view them in that light. It will be known that under the protection of the Board in question experiments on animals are systematically carried out and reported on year after year. Dr. Sidney Martin, the *Report* tells us, has been experimenting "on the behaviour of the typhoid bacillus in soil," and found that it behaves worst in "organically polluted soil." But the old-fashioned Inspector of Nuisances, and indeed all sanitarians, have known for generations that such soil was a cause of the worst of fevers and infections. Yet, we suppose that in this "important research" Dr. Martin has been sustained by payments of public money.

THEN we learn that Dr. Cantley has also been at work. In the phraseology of the *Medical Journal*—

"Dr. Cantley has studied the conditions which affect the life of the typhoid bacillus in milk. Although he *did not* find that any bacterial association inhibited the growth of the typhoid organism, yet it is reassuring to read that he *could not* observe that the presence of any microbe facilitated its survival or multiplication."

So far the outcome of Dr. Cantley's subsidized operations is negative evidence only, evidence of what he could not or did not do. Then we go on, still quoting the *Medical Journal*—

"He has, however, placed the long-suspected fact—that the typhoid bacillus can survive in milk under the ordinary conditions of transit and keeping, even when the milk has turned sour—on a scientific basis."

Of course "scientific" here means "experimental" basis. But we had thought that sanitary science had long since decided that typhoid fever could be communicated through milk, and that therefore it was perfectly well known "that the typhoid bacillus can survive in milk." Perhaps John Bull had not sufficiently paid for the discovery before.

NEXT we learn that Dr. Klein—that is, the original Dr. Emmanuel Klein—"records his further observations on the mutability of the cholera microbe." The outcome, as we gather from the *Report* itself—the *Medical*

Journal having denied itself the satisfaction of publishing this tit-bit—is as follows:—

"These results, as need hardly be pointed out, are in entire harmony with facts respecting the behaviour as a disease of cholera in this and other European countries."

Again we have well-known facts confirmed; but when the facts were established, where is the scientific value of this pottering about with microbes in the laboratory? We should like to have this question answered.

THE *Practitioner*, December, 1897, p. 646, reports some experiments by Dürck, who plunged animals into ice cold water after keeping them for twenty-four hours or more at a temperature of 37° to 39.5° C. Pneumonia was induced by this treatment in five cases, in one of which the bacillus of pneumonia was discovered. This is one of the large class of cases in which it would be impossible and useless to employ anæsthetics, yet in which cruelty is necessarily involved.

DR. C. B. FERRELL, writing in the *Medical Brief* for January, 1898, says that he has never used anti-toxin in the treatment of diphtheria because he could not muster up faith enough to believe in the supernatural and so do violence to his scientific convictions. Its advocates know nothing of the injection before it enters the horse and they know nothing about it after it is taken from the horse. Neither the microscope nor chemistry throws any light on its mystery; all they know is that it kills guinea-pigs somehow, though it does not produce in them anything in the least like diphtheria. Dr. Ferrell wants something more scientific, he has not the faith of a saint.

THERE is a little body in our intestines called the *vermiform appendix*. It is a blind tubular projection, about three inches long and about the size of a large quill. No use has been discovered for it, but surgeons attribute all sorts of iniquities to it and demand on any pretence to remove it by operation when they get the chance. It is the most fashionable operation of the day. Dr. Kirby has addressed, not an ode, but a consolatory article to this much-abused portion of our anatomy, and says:—

"Rest content, little one, that thy life will soon be out of danger, for thine enemies have had many fads in the past which are no more, and this one, in which they propose to disfranchise thee, will, like the rest, soon be a thing of the past."

THE *Medical Brief* has been writing strongly on Bacteriology. It says:—

"Bacteriology is resolving itself into a mass of conflicting testimony based upon hypotheses and individual assertions. The sponsors of the so-called science were extremists, who, seeing germs in diseased tissues, at once jumped to the conclusion that the germ caused the disease, and then spent their time and exhausted their ingenuity trying to make a case. Bacteriology has always been a brummagem science, full of inconsistencies, with no fixed deducible laws. It has terrified and tyrannized over many, has won passing notoriety for others, and has proved a money-maker for those who are on the look-out to profit by the ignorance and gullibility of others."

DR. BERDOE's exposure of Professor Sanarelli's murderous experiments on human beings at Flores has caused the *Monte Video Times* to attempt some defence of the atrocious proceedings. It explains that of the five victims one was "a condemned criminal who voluntarily

submitted himself on condition that he should be pardoned if he survived, and that the others were incurable pauper lunatics, who in a more advanced stage of civilization will probably be submitted mercifully to a lethal chamber." The Dogs' Home at Battersea has an apparatus of the kind suggested. The *Monte Video Times* thinks that the scientific results were "quite worth the sacrifice of any number of animals, and even of some human beings."

THE *Catholic Times*, in a leader on "Our Doctors," recently expressed itself on medical education thus:—

"The views of a medical practitioner are generally grafted upon him during the jejune days of his youth. The dear lad has just left his school-books. He plunges eagerly into biology and dissects with fearful and expectant curiosity his fresh-water mussel, his sea-urchin, and frog. Then the professor of physiology gets hold of him. He is shown that when a frog's legs are tickled it will jump. 'Tis the beginning of wisdom, and the sure foundation of Marshall Hall's renowned reflex spinal theory. Next he learns his physiological catechism; pains and pleasures are only physical vibrations, the movements of a man's limbs are his sensations run to muscle and his consciousness the same sensations run to brain."

And so on.

THE article goes on to show how the teaching physician essays to recast the physiologists' puppet, and henceforth the poor student is the victim of an extravagant dualism. Alongside of his materialistic physiology he has to make room for a recognition of higher physical activities. "Surely," says the writer, "ethical conduct goes for something, and medical practice among human beings should be upon a higher level than is required for horses and cattle." But the physiologist stops the way.

WE learn from a correspondent at Bombay, as well as from the local newspapers, that in view of the renewed prevalence of the plague, the Haffkine inoculations have again been resorted to. Whatever protection they may give—if any—is but of short duration, as a letter printed in the *Times of India* of December 31st, signed by Dr. Haffkine himself, admits that two people who were preventively inoculated in the preceding cold season had died of plague. The German Committee of Investigation found that "about twenty other cases were fatal in spite of the preventive treatment." However, we learn from an article on this subject in the *British Medical Journal* of December 25th last, that M. Haffkine's invention is now independent of animal experimentation. Says the *Journal* (p. 1864), "Unlike the anti-toxin serum, the prophylactic is easy to prepare, can be obtained in large quantities in the laboratory, and requires no animals in its preparation." This particular nostrum, then, passes out of our sphere; but, at the same time, it is part of a most objectionable system, which reverses the common-sense idea of cleansing the human body in order to restore it to health, by resorting to wilful contamination with anti-toxins and serums.

DR. SHINGLETON SMITH alleges, in the December number of the *Bristol Medico-Chirurgical Journal*, that living tubercle bacilli may be obtained from Koch's tuberculin. A correspondent of the *British Medical Journal*, signing himself "F. N. C. S.," asks whether this is an accepted fact, as he uses the method very largely! If this treatment does not comply with Voltaire's sarcasm that "doctors pour drugs of which they know little into bodies of which they know less," we shall look

in vain for a better example of the charge. Koch makes an injection and does not know it contains living deadly disease germs, doctors in their grovelling superstition about science blindly inoculate their patients with certain filth of which they know only that it is a product of a vivisector's laboratory, then when alarmed at a suggestion of danger from an over-curious brother practitioner, they innocently write to a medical journal to ask if it be "an accepted fact" that the filthy inoculation is also a murderous method. What a satire on advanced medical science!

BACTERIOLOGISTS have recently changed their ground concerning anti-toxic and microbe-killing substances. Phisalix, says the *Lancet*, demonstrates that bile has a marked influence on the venom of serpents, and Bouchard declared that anti-toxis does not come from microbes but from the glandular secretions. Phisalix injected into guinea-pigs the chief elements of bile taken from any animal, and found that any of these substances confers on the guinea-pig immunity against serpent venom. How about the bacillus of diphtheria and the serum cure? Is the theory already out of date?

THE *Journal of the American Medical Association*, reporting the proceedings of the late Medical Congress at Naples, says (January 1st, page 36):—

"A Journal stated that experimentation with dogs and tests of sixty small children, necropsies of others, etc., had demonstrated that the prejudice in regard to the incompatibility of calomel with acid was unfounded."

That may be, but the statement is an additional proof that the vivisector is incompatible with a Children's Hospital.

THE *Semaine Médicale* recently told the story of the accidental discovery of the method of curing sciatica by hydrochloric acid. A man in an Algerian hospital had injections of salt and water in the region of the sciatic nerve, but with little or no benefit. Ignorantly fancying that "spirit of salts," the vulgar name for hydrochloric acid, was only a stronger kind of the salt he had been using, he procured some and applied it with a brush to the affected parts with immediate benefit and a subsequent cure. Dr. Gennatus, of Montpellier, reports that he has since treated twelve cases with the acid, and a cure has been effected in the whole number. How is it that the experimenters on animals never by any chance happen on so brilliant a discovery as this?

EXAMINING Ringer and Sainsbury's *Handbook of Therapeutics*, the thirteenth edition of which is just out, we were surprised to see the following paragraph still allowed a place in so popular a book:—

"If to a gouty person, free at the time from an acute attack, a salt of lead be administered, it will develop acute gout with its accompanying symptoms of severe pain and high fever. The author has repeatedly verified this fact." This is an unblushing admission that cruel experiments on human beings are mere routine practice.

THE *New York Medical Journal* (January 8th) describes some experiments in cutting out portions of the intestines of a small dog. The operation was done under ether. After recovery from the anæsthetic the animal lived seventy-two hours, dying at last from severe inflammation of the bowels, with all but total suppression of the natural functions. The anæsthetic of course only spared the animal the pain of the actual operation, which lasted but a few minutes.

THE NATIONAL ANTI-VIVISECTION SOCIETY.

SPECIAL COUNCIL MEETING.

WITHDRAWAL OF MISS COBBE FROM THE SOCIETY.

The following circular, which has been issued convening a Special Meeting of the Council to consider the resolution set forth therein, is published in "THE ZOOPHILIST" in compliance with the rules:—

"20, VICTORIA STREET, LONDON, S.W.,
19th of January, 1898.

"SIR OR MADAM,—I have the honour to inform you that a Special Meeting of the Council of this Society is hereby summoned to be held at the Westminster Palace Hotel, on February 9th, at three o'clock, when the following resolution will be submitted:—

"The Council affirms that while the demand for the total abolition of vivisection will ever remain the ultimate object of the National Anti-Vivisection Society, the Society is not thereby precluded from making efforts in Parliament for lesser measures, having for their object the saving of animals from scientific torture."

"The Committee earnestly hope that you will be able to attend the meeting.

"Believe me to remain,

"Your faithful servant,

"STEPHEN COLERIDGE, Hon. Secretary."

MISS FRANCES POWER COBBE ON
"LESSER MEASURES."

The following letter in connection with the proposal above set forth has been addressed to us by Miss F. Power Cobbe:—

LESSER MEASURES.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—I beg leave to address through your columns the Members of our Society whose representatives on the Council will shortly be invited to pass an important vote. The question to be decided (as I understand the matter) is this: "Whether lesser measures than the Society's Bill for the Total Prohibition of Vivisection shall be introduced into Parliament in the approaching Session?"

It is needless to say that I sympathize from the bottom of my heart with the impatience at the present prevalence of Vivisection which has inspired this proposal; and that I honour the eagerness of its promoters to obtain any reduction, however small, of the numbers and sufferings of the victims of science. It is however my duty, in fidelity to the lasting interests of our cause, to lift my voice in warning against obeying this impulse without sufficient consideration of the consequences as regards the larger policy of our crusade.

Of the details of the proposed plans for "lesser legislation" I do not desire to speak. They are not yet, I believe, entirely formulated, and those which have been suggested appear to be attended each with special disadvantages and dangers.

It is against the project of any Bill which shall practically attempt to amend the Vivisection Act of 1876 that I protest. And for this simple reason. Such a Bill, promoted by our party, must inevitably (whatever loud declarations we may make to the contrary) constitute a tacit renunciation of our true object—the total suppression of vivisection,—and an acceptance (at all events for years to come) of a goal far short of our righteous demands. It will infallibly be so understood both by friends and enemies, here and in America; and the consequence will be that a broad and intelligible moral controversy will dwindle down to a squabble with the vivisectors concerning their wretched cheats of anæsthetics and curare and to a hopeless struggle on that slippery ground to amend an Act of Parliament which is essentially irremediable, because it is wrong in principle. That Act (39-40 Vict., c. 77) takes it for granted that the torture of animals for therapeutic and scientific purposes is a practice which may properly be sanctioned by the legislature. Our guiding principle, for the last twenty years, has been, that Vivisection is "an abominable sin," and no more to be sanctioned and licensed than robbery or rape. These two

diametrically opposite views of the matter cannot be reconciled. They leave no margin for compromise.

Let me suggest a parallel, which is scarcely a caricature of the monstrous absurdity of the Vivisection Act, following, as it did, fifty years after Parliament had pronounced ordinary cruelty to animals to be an offence, and after thousands of persons had been punished for such comparatively trivial acts as beating or overdriving donkeys and horses.

Suppose that our fathers, long after they had nobly abolished Slavery in the West Indies after slow gradual advance, had gone back, and in view of the great importance of the Sugar interest (almost as great as the Health interest perhaps!) passed a new Act whereby Licences should be granted by the Secretary for the Colonies to certain Planters in Jamaica to hold Negroes in Slavery; and further that, in consideration of the high necessities of the case, the said Secretary for the Colonies should give Certificates to some of these Licensed Slave-holders, authorizing them to treat their Negroes precisely as Legree treated Uncle Tom.

Let us now merely add the hypothesis that, after this Act has been in force for twenty years and two or three hundred Planters have been licensed and half of them certificated, there should arise a new Wilberforce to introduce another Bill into Parliament. It should, however, not be a Bill to repeal and sweep away the atrocious Slave-torture-Licensing Act, but a "Lesser Measure," to amend the same, and to provide, let us say—that the presence of a Clergyman be required whenever a Negro is to be whipped to death. Or, perhaps, that a Negro may not be gagged at the same time as he is flogged. I ask: Whether the introduction of any such "Lesser Measure" would not be hailed, in the House and out of it, by the advocates of Slavery, as the concession of the whole case on the Abolition side?—a "throwing up of the sponge?" Could the Abolitionists thereafter go about denouncing Slave-holding as "the sum of all villainies" as regards the Negro, as we say Vivisection is as regards the brutes?

We have, I am convinced, no chance of obtaining any legal check, small or great, on the cruelties of vivisection, for years to come. Just in as far as any proposal of ours should threaten effectively to trammel the vivisectioning gang and they should see no clear loop-hole for evading it and throwing fresh dust into the eyes of the public, just so far would they bring to bear against it all the force they now command in Parliament and the press. Our sacrifice of principle would be utterly fruitless and leave us weakened in every way. But though we cannot, I believe, gain any point *directly* through Parliament at our present stage, we can and ought to strain every nerve, by a far wider propaganda and much more complete organization than we have yet achieved, to create such a revolution in public opinion as must eventually carry everything we want along with it; such a revolution as the real old Wilberforce would have raised against the law for Licensing Slave-holders and slave torture, which I have described as a parallel to the Vivisection Act.

The whole hope of our cause rests on the success of our appeal to the heart and conscience of England, rendering Vivisection "*Infamous*" before we can hope to make it "*Illegal*." It is therefore suicidal policy to weaken in any degree the force of that appeal, as we now raise it *against the practice itself* as a wicked misuse of the lower animals. To leave the broad issues of the controversy to haggle over the details of "Lesser Measures," is to paralyze all our tongues and pens.

For my own part I feel so strongly on this matter that, notwithstanding the pain it will cost me, I shall—if the Council decide to promote "lesser measures"—sever my connection with the Society which I founded, as a protest against such grievous dereliction. Another long-tried friend of the cause is of the same mind as I, both as regards present adhesion to the Society and the future endowment which we had intended of its funds; and before resolving to carry on the present project the Council should reflect that they will be resigning (not for *themselves*, which might be magnanimous, but for the Society of which they are Trustees) the advantages of a substantial permanent endowment.

We have all the same object in view,—to stop vivisection,—and we shall part company, if part we must, with mutual respect and good will. But for myself my decision is

unalterable. I will join in no action which can be interpreted to concede the right of Parliament to license the torture of animals. I will remain a member of no Association which lowers by an inch the demand that the "Abominable Sin" of Vivisection shall be forbidden in the land and not regulated any more in any manner whatever.

I am, Sir, yours, &c.,

FRANCES POWER COBBE.

Hengwrt, January 17th, 1898.

THE HON. STEPHEN COLERIDGE'S REJOINDER.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—May I be permitted on behalf of the Committee of the National Anti-Vivisection Society to lay before the members at large the reasons that have led us with pain and reluctance to differ from Miss Cobbe.

For twenty years the policy Miss Cobbe advocates of exclusively confining our demands to total abolition has been followed, and for twenty years the torture of animals has steadily increased.

It is a matter of common knowledge that a Bill for the total abolition of vivisection has no chance whatever of becoming law within the lifetime of the youngest of us.

Miss Cobbe would, nevertheless, tie our hands and prevent our making any efforts to put down the torture that is daily and hourly going on, and would confine us to indulging in fervent aspirations that have not the remotest chance of being fulfilled in this generation.

We desire to gather together all the humane people in and out of Parliament and make a practical effort to put down torture as distinguished from painless vivisection.

We do not believe it to be beyond the reach of human ingenuity to make torture illegal.

Miss Cobbe's comparison of slavery with vivisection is surely inconclusive, for we do not kill and eat men for food and we do these things to animals.

Well then, we wish to make torture illegal, by abolishing all special certificates under which the torturers are relieved from their obligations, to administer complete anæsthesia, and to kill the animal before its recovery from unconsciousness.

We wish totally to forbid all use of the abominable drug curare, that paralyses motion and leaves sensation intact.

We wish to obtain the free right of entry into any laboratory for our own properly appointed inspectors, so that we may see what goes on, and we believe that such measures are no stumbling-blocks but are rather stepping-stones to total abolition.

This is our policy as opposed to the hopeless sterile policy of the last twenty years, and if the wretched animals could speak we believe we know to which party they would appeal.

Miss Cobbe supplements the arguments addressed to our minds with another addressed to our money-chest, but I trust that this great Society will not allow Miss Cobbe's cheque-book to divert its attention from the vivisector's knife.

As Honorary Treasurer it has been my duty very carefully to investigate the resources of the Society, and in the process the duty has become enlarged to a pleasure, and I can assure the Society they may face the threatened withdrawals, if they should really take place, with composure.

Finally, Sir, let me say that in laying this resolution before the Council there is not one of us who has not followed what we believed to be our duty at the expense of our affections.

Miss Cobbe has endeared herself to us all in a manner so intimate and irresistible that no one of us can thus differ from her without a very painful struggle.

We all admire and respect her for her splendid abilities, for her high and constant courage, for her stainless and beautiful life. But at this point of our path we believe that her judgment is astray, and we are bound to follow what we hold to be the better way.

I remain, Sir, your faithful servant,

STEPHEN COLERIDGE,

Hon. Secretary and Treasurer.

The 21st of January, 1898.

HOME INTELLIGENCE.

LONDON.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

In view of the impending opening of the British Institute of Preventive Medicine on the Thames Embankment, the London Anti-Vivisection Society sent to the Home Secretary a letter, dated December 31st, stating that the committee, taking cognizance of the fact that there were already in London alone thirteen places registered for experiments on living animals, ventured to express the opinion that any further addition to existing facilities was not in any way warranted, and trusting that the Home Secretary would exercise his discretion in the direction of withholding the licence sought for. The following is the Home Secretary's reply:—

"WHITEHALL, January 4th, 1898.

"SIR,—With reference to your letter of the 31st ult., I am directed by the Secretary of State to inform you that no application has yet been received for the registration of the British Institute of Preventive Medicine under 39 and 40 Vict., cap. 77, and that the protest of your committee will be duly considered in the event of an application being received.

"I am, Sir, your obedient servant,
"HENRY CUNYNGHAME."

MR. R. S. WOOD AT WORK.

Mr. R. S. Wood addressed a meeting on Tuesday, January 18th, in the schoolroom of St. Mary Magdalene, Paddington, speaking on the Vivisection aspect of the general question of greater humanity to animals. Lady Pechell presided over an audience numbering about 100. Mr. Wood spoke for upwards of half-an-hour and had the satisfaction of receiving expressions of satisfaction at the door, though there was one dissident—a hospital governor, we understand—present. On Wednesday, January 19th, Mr. Wood spoke at a meeting of the Mutual Improvement Society at Sunbury, some thirty members being present. After an address going at large into the subject, several questions were addressed to Mr. Wood, who had been attentively listened to. The questioners were duly answered, and several members enrolled for the Working Men's Branch.

Mr. Wood requests us to state that in the report of the meeting at Hove in last month's *Zoophilist* (taken from a local paper) the words "Victoria Cross" were, by a printers' error, printed for "Victorian era."

BOLTON.

A very successful drawing-room meeting was recently held at Oakfield, Heaton, Bolton, by kind permission of Mrs. Crook, a warm supporter of the Anti-Vivisection cause in Bolton. The Rev. H. J. Elsec, M.A., who presided (in the absence, through illness, of the Rev. Canon Doman, M.A.), expressed his conviction that even if knowledge might be increased by vivisection, it was not a right means to use, and further, that it tended to harden feeling.

Mrs. HERBERT PHILIPS, of Macclesfield, gave a stirring address, instancing several kinds of physiological and pathological experiments involving cruelty to animals, and stated that Professor Ray Lankester admitted years ago that one experiment would lead to countless others. Vivisection, described as "The Science of Torture," was introduced into England from France, and Mrs. Philips gave the history of the origin of the Anti-Vivisection movement in this country. Instances of horrible experiments, aptly described as "devils' tricks," were given, the technical terms being translated into plain English, and allusion was made to Dr. Klein's admission, before the Royal Commission, that "he had absolutely no consideration for the sufferings of animals;" also to the statement of another vivisector, "that it was the advancement of knowledge, and not utility to medicine, that was the object of vivisection."

The Rev. THOS. WOODHOUSE (Farnworth) moved a resolution, "That in the opinion of this meeting the practice of vivisection, however safeguarded and restricted, involves

such cruelty to dumb animals as there is no right to inflict; this meeting, therefore, recognizing the practice as morally indefensible, calls for its entire prohibition in this country."

The Rev. J. D. WOODHALL, B.A., seconded, and both speakers strongly condemned the practice.

The resolution was carried *nem. con.*, and a vote of thanks to Mrs. Philips, Mrs. Crook, and the Chairman, moved by Mr. FRANK TAYLOR, J.P., seconded by the Rev. C. J. STREET, M.A., LL.B., Chairman of the Bolton Anti-Vivisection Society, concluded the proceedings.

BRISTOL.

LECTURE AT A WESLEYAN BIBLE CLASS.

On Sunday, January 2nd, Mr. T. A. WILLIAMS, of the Bristol and West of England Society, was the speaker at Brookland Wesleyan Bible Class. There was a large attendance of members and friends. The President of the class introduced the speaker, whose subject was "Mercy." Mr. WILLIAMS said that "Mercy" was a part of the moral law, but religious minds had a tendency to overlook it. It bore directly upon human conduct, and no true ethical progress was possible without it. Mercy was not possible without Justice, and it was equally true that Justice was not possible without Mercy. Did it not become the duty of every religious man to be merciful to all forms of life? Let them see how far they could help to prevent the suffering around them. The growing movement against vivisection was, in his opinion, evidence of a deeper sense of their religious duty.

MR. WILLIAMS AT A TEMPERANCE CLUB.

On Monday evening, January 17th, at the meeting of the Robert Charlton Lodge of the Sons of the Phoenix, Mr. John Wood presiding, an address was given by Mr. T. A. WILLIAMS upon the subject of "Pain." The speaker said there was no subject that presented more difficulties to the thoughtful mind than the contemplation of suffering. They must avoid a morbid view of the subject, because there was really a great deal of joy in life, but he felt that there might well be more interest displayed in the possibility of preventable suffering, and he gave many illustrations where human pain might be easily lessened. He did not agree with those who urged that men would become less heroic if they were saved from pain, but he thought that true heroism consisted in bravely bearing all the pain that was inevitable, and also in restless activity to remove all the unnecessary suffering in the world. The sensitive mind and tender heart could not be otherwise than wretched when it realised the extent of the sufferings of animals. There was no justification for the existence of these; it was simply the result of ignorance or of the callousness which marked the suffering inflicted upon animals in vivisection. The speaker described as abhorrent and repulsive the fact that this was inflicted under the plea of service to man, and said people must learn and obey the laws of life. Ignorance, crime, and injustice kept disease in their midst, and the way of escape would not be found along the path of vivisectioning helpless animals. Mr. LLEWELIN proposed, and Mr. J. R. CLARK seconded, a vote of thanks to Mr. Williams for his very thoughtful address.

WAVERTREE, LIVERPOOL.

The monthly meeting of the Wavertree Women's Liberal Association was held in the Liberal Club on Monday afternoon, January 17th, the president (Mrs. Egerton Stewart Brown) in the chair. Mrs. Allan Bright gave a very excellent address on "Anti-Vivisection," which was listened to with great interest. She quoted from Mr. Lawson Tait and other anti-vivisectionists scientific points on the question, and her own well-chosen, unexaggerated language from a humane point carried great weight. A discussion followed, which was also very interesting. Miss Fisk proposed a vote of thanks to the lecturer. This was seconded by Mrs. Brown, and supported by Mrs. Charles Morrison, who further urged the claim of all dumb animals upon our sympathies. A vote of thanks to Mrs. Stewart Brown closed the proceedings. Several present joined the local Anti-Vivisection Society.

THE SCOTTISH SOCIETY.

MEETING IN EDINBURGH.

On Tuesday, the 11th January, a meeting was held at 21, Leopold Place, Edinburgh, the Rev. J. Baird presiding. The Rev. L. F. Armitage gave an address on "The Difference of the Human Construction over that of the Lower Animals." Col. Waterston also took part, and a number of questions were put and answered at the close. The usual votes of thanks were awarded.

MEETINGS IN GLASGOW.

The monthly prayer meeting was held in the Protestant Alliance Room, Argyll Arcade, on the 4th January, when the Rev. J. W. Mitchell presided and conducted the proceedings.

On Friday afternoon, 21st January, a meeting was held in the Ladies' Seminary, Melville Street, Pollokshields, Glasgow. W. C. Maughan, Esq., J.P., presided, and there was a good attendance. The Rev. William Allan, M.A., of Edinburgh, addressed the meeting, taking as his subject—"Vivisection, what is it?" Having explained what it was, he dealt in a lucid and instructive manner with the moral and scientific objections to be raised against it. The Rev. Dr. Kerr, the Rev. J. A. Smith, Colonel Waterston, and others also took part. Several questions were asked and answered, and the usual votes of thanks were awarded.

OBITUARY.

MISS FULLER MAITLAND, OF ELGIN.

The Scottish Society has lost recently some of its most loyal friends. Since our last notice Miss Fuller Maitland, The Knoll, Elgin, has passed away. She belonged to a family of high position, well known both in Scotland and England. She was a person of considerable culture and possessed an active and intelligent mind; above all she had a tender and generous heart, quick to feel, to sympathize, to love. Some years ago, through the visit of the Rev. John Baird and Colonel Waterston to the Elgin district, where they held meetings, she was led to take an interest in the anti-vivisection movement. She at once became a supporter of the Scottish Society, and had ever since taken a warm interest in its work, losing no opportunity to advance its interests. During her life so far as her means permitted she contributed to the expenses, and in her will she has kindly remembered the Society. Her life was one long manifestation of self-sacrifice, and this was not displayed in what she gave and did, but by what she was. She fell asleep on the 21st December, and her remains are buried in Elgin churchyard.

MR. JAMES MCCALL, OF GLASGOW.

Another breach has been made by the death of Mr. James McCall, Glasgow. He was a most unassuming, kind, and self-denying man, and faithful and devoted to good movements. Along with his sister, Miss McCall, he took a great interest in the Scottish Society's movements in the West of Scotland, and Miss McCall has been one of the executive on the Glasgow and West of Scotland Committee ever since its formation. By word and deed he was ever ready to aid and promote the cause. His amiable disposition and kindly deeds secured for him general esteem, and he will be much missed by members and friends of the Society.

MRS. STEPHENS, OF PORTOBELLO.

Mrs. Stephens, of Portobello, who has also been removed by death, was a warm friend and willing subscriber to the funds of the Society. She never lost an opportunity for explaining its object and aims, and was ever ready to promote its interests.

The Committee of the Scottish Society felt deeply the loss of these friends, and wish us to convey to their mourning relations their deep sympathy with them in their hour of sorrow.

J. H. W.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, TUESDAY, FEBRUARY 1st, 1898.

INSOLVENT PHYSIOLOGY.

THE Christmas number of the *Lancet* contained a long and elaborate article entitled "The Annus Medicus, 1897." The annual stock-taking and balancing of accounts of the medical year is naturally of considerable interest to anti-vivisectionists, because it is in statements like this we expect to find an account of such matters as are claimed to the credit of the practice we oppose. We turned therefore with eagerness to the section headed "Biology and Physiology," and soon discovered that, like the buffet of Dame HUBBARD, it contained but a beggarly array of empty platters. It commences with the note which dominates the whole performance. "In the domain of biology and physiology no discovery of capital importance has to be recorded." What! Have the torture mills of all Europe, America, and the rest of the world been grinding for a whole year and produced nothing but wind? Have the hundreds of researchers who have been prying into the innermost recesses of animal life and devising ever-fresh means of eliciting painful responses to cruel experiment actually nothing to show for it? Within the memory of the older members of the medical profession the number of periodicals devoted to medicine and its allied sciences lying on the tables of the library of the Royal College of Surgeons of England did not exceed thirty or forty; there are now no less than five hundred, many of them filled with reports of the details of experiments and statements concerning researches on living animals, and supposed with or without good reason to have some bearing on the treatment of disease, yet who would be rash enough to say that this vast increase in scientific work, this immense accumulation of observation bears any but the most infinitesimal proportion in good results for the healing art to the stupendous labour bestowed on the work? In truth the great majority of the experiments have only the very remotest bearing on the business of the practical physician or surgeon. Thus Mr. DAVENPORT and Miss PARKINS, we are told, "have endeavoured with ingenuity to determine the

influence of gravity on the movements of highly organized animals, selecting the slug as a good subject for experiment." To hear of "their elaborate experiments" on slugs taxes our own gravity till it helps us to understand the slow progress of practical medicine. Another problem which occupied the attention of some Berlin professors was connected with the question whether life would be possible in the absence of bacteria; experiments on guinea-pigs seemed to show that it is. It is instructive to learn that "physiologists are divided on the question of the cause of the movements of the heart," a matter which we are constantly assured has long ago been satisfactorily settled by Vivisection. It is disappointing at this time of day to be told that "our knowledge of nerve and muscle is obviously at present too incomplete to permit the question to be solved," even with the assistance of the five hundred periodicals on the table of the College of Surgeons. Dr. VAUGHAN HARLEY and other experimenters have made observations on the effect of removing the pancreas from dogs and birds, and though the dogs seem to digest their food fairly well under the mutilated condition, Dr. W. KAUSCH found that the birds became lean and died in less than fifty days which tends to show that birds and dogs differ considerably in their digestive functions, a fact we have long suspected!

Mr. S. VINCENT, after many experiments on fish, "believes" that the active principle of the supra-renal capsules, which are little bodies connected with the kidneys, has a contracting influence on the small arteries of the body. As the function of these organs is very obscure, Mr. VINCENT's belief will probably count for very little in the opinion of his fellow-experimenters. The poisonous effect of human sweat has been "alternately admitted and denied," but Mr. S. ARLOING has demonstrated it by injecting the sweat into the veins of dogs and rabbits. Nothing but a morbid passion for research could have inspired so cruel and useless an experiment. Professor SHERRINGTON has made what the *Lancet* calls "some interesting observations on the effects which can be induced by appropriate stimulation in monkeys" from whom the brain has been removed. Dr. STEINACH, "an able physiologist," recently endeavoured to show certain things about the posterior roots of the spinal nerves, but has had his experiments "re-investigated" by Mr. A. J. HORTIN SMITH, who upsets his conclusions altogether. "Here we go up, up, up, and here we go down, down, down," as the nursery jingle has it. Mr. WALTER HEAPE has performed some "curious experiments" in embryology. He has successfully introduced the ova of an Angora doe rabbit into the uterus of a hare doe and has been gratified by a litter of four hares and two rabbits; both sets were true-bred. The experiments may well be termed curious; to us they seem as idle as they are repulsive. And this is the sum total for 1897 of the parturient efforts of the physiological mountain.

These researches, be it noted, were not confined to England, where physiologists are supposed to be some-

what impeded in their work by our legislative enactments, but are gleaned from the physiological fields of the whole civilized world. As for the science of therapeutics, we are told that "Although the publications connected with the treatment of disease have, as usual, been very numerous during the past year, interest continues to centre round the different applications of various forms of serum treatment." The experimenters have nothing to show for their year's work on behalf of the healing art, but some tubes of essence of horse and juice of rat which they suggest should be injected into our circulation for all sorts and conditions of disease. What a confession of insolvency. They offer us the anti-toxins because they are mysterious in their origin and unknown as to their mode of action. We have let them trade on our capital, pledged our credit as a humane, Christian people, and when we ask for our dividends, they offer us the notes of the Bank of Elegance and a cheque on the *pays de Coccagne*.

MICROBOMANIA AND MAN'S TENACITY OF LIFE.

IN all probability there hardly ever was a man, and especially a scientific one, who did not sometimes run a hobby or favourite pursuit up to the confines of the ridiculous. We have lately received a copy of a pamphlet by Mr. F. A. COOPER, B.Sc., Lond.: entitled *The Origin of Zymotic Diseases*, in which a most extraordinary theory is broached. It is that cholera, typhoid, and other so-called "filth diseases" are caused—the first by the common house-fly, and the latter by the aphid; and other diseases by other insects. But unfortunately, the "B.Sc." which the author puts after his name, seems to be the only sign of science about him or his theory. How unscientifically he disregards the laws of evidence may be gathered from the following example. He says on pages four and five that—

"The connection of the common house-fly with cholera has been so frequently stated as to be a matter of common knowledge [?], but the connection usually attributed to it is that of a carrier of the germs of the disease; but why, if the germs are so disseminated, should it always be the house-fly that acts as a carrier and not other insects? Cholera is a disease of tropical climates where the insect tribe are most numerous and are in endless variety. Surely, then, there must be some closer causal connection to account for the solitary instance of this one insect." And then, a little further on—"assuming the truth of the larval theory of disease, all recorded observations tend to implicate the house-fly as its origin."

On this basis of assumption, absolutely without a tittle of proof, the author builds a superstructure of hypothesis from his imagination, and seems then to think that he has done a scientific act.

Mr. COOPER, B.Sc., does not appear from his book to be a practical bacteriologist; but a certain Dr. RANSOME, who was lately given notoriety in the *Hospital* and some of the London daily papers, probably is. At any rate there is more of the conventional scientific ring in the lucubrations of the latter. Dr. RANSOME has been trying to frighten people by laying stress on the risks

they run from microbes of disease in churches, concert halls, and theatres. He seems only now to have found this out, just as every man who newly takes up the pursuit of bacteriology seems to conceive that the germs he isolates, magnifies, photographs, and describes are original discoveries of his own. In regard to theatres, Dr. RANSOME says:—

"The halls and passages and galleries of these places, and even their auditoria, are seldom, if ever, visited by the sunlight. . . . They are imperfectly ventilated. . . . They are true hot-beds and forcing grounds in which may be kept alive, and even cultivated, the germs of tuberculosis and other diseases." But the churches seem to be even worse. "Let anyone gifted with an ordinary sense of smell, or who knows what fresh air means, enter almost any of these assemblies for public worship, even after only a short service, and let him describe the atmosphere he will meet on entering. It is charged with 'air-sewage' of the vilest quality, the imperfectly removed emanations from hundreds or thousands of human bodies."

All this is much exaggerated, as most intelligent men in charge of such structures are now commonly alive to the necessity of ventilation, and "having a good blow through" the buildings in their charge. Moreover, surely architects, if not builders, have made some advance in the art and practice of successfully ventilating public buildings and providing for a change of air within their walls. But if the state of affairs be as bad as Dr. RANSOME has stated, the puzzle is how in the world mankind, who, for centuries, in civilised countries, have been in the habit of assembling in much more ill-constructed buildings than the modern church and theatre, have managed to survive at all. As a fact, however, from a variety of causes acting together, mankind are now more tenacious of life than ever before.

What we fear is that both the gentlemen to whom we have referred are much more likely to be suffering from the microbomania so prevalent in many of the experimenting laboratories, than clothed with the scientific spirit. They both seem to have ridden their hobbies too far. In this country, at all events, as we have often remarked, the causes of the multiplication of microbes, and of the spread of infectious disease, have been infinitely lessened. But the microbiologists are so proud of their discoveries, which, with the microscope at their disposal, they should have made much sooner, that they are for ever proclaiming the products of their science to the world as wonderful and novel, when really they are things which have existed from the beginning of time, which mankind have had to submit to throughout all history, and which, with or without, or in spite of, scientific and medical men, they have survived.

DISSECTION LESSON FOR CHILDREN.—The residents of Matteawan, New York State, are greatly excited over the fact that Miss Nearing, teacher of physiology in the local public school, yesterday performed an autopsy on a cat for the benefit of her pupils. The teacher, a strong-minded young woman, killed the animal with chloroform, and then, assisted by several of the boys, dissected it before a large class of children of both sexes, aged from ten to fifteen. The horrible sight of the mutilated members caused many of the children to leave the school on account of sickness.—*Echo*, London, January 20th.

OUR CAUSE IN THE PRESS.

THE METROPOLITAN HOSPITALS AND
VIVISECTION.

The following letter, which contains important information, appeared in the London *Echo* on the 29th of December last:—

"SIR,—The annual general meeting of the constituencies of the Metropolitan Hospital Sunday Fund this year (held a couple of weeks ago at the Mansion House) is worthy of the attention of those who are interested in the history of reforms. For at that meeting a new factor was introduced in the discussion, a factor which must play a predominant part in hospital reform if we are to have any true reform at all. A clergyman proposed a modification of the resolution before the meeting on the ground of the increasing recognition of vivisection. The Lord Mayor promptly ruled him out of order, saying, 'We are not discussing vivisection.' Someone in the room called out, 'But you will have to consider it.' This is the first time such a protest has been raised; it is therefore not wonderful that it was promptly extinguished. English history is full of similar stories—it is also full of proofs that the protests promptly extinguished when first made have been raised again and again till they have borne down all opposition. Medical men may wrangle as much as they please over the evils of over-crowding the out-patient department of hospitals, and the evil these do in diverting fees from the profession—the public cares not for these things. What it cares for is whether the patient is the first consideration in hospitals. It is beginning to learn from hospital officials that science—so-called—stands forward in the minds of many of these officials as more important than the patient, and the impression is getting hold of the public that the brilliant vivisector is not perhaps the safest man to have the run of a hospital. The fact that some of the clergy gave voice to this impression at the annual meeting of the Hospital Sunday Fund shows that this idea is gaining ground, and, in view of the good of the patients in hospitals, it is to my mind the most satisfactory of all the utterances regarding hospital reform which we have heard during this Jubilee year. Disraeli once said, 'You shall hear me yet,' when silenced in the House of Commons, with what result we know. Those who protested at the Mansion House may, like Disraeli, have to wait somewhat, just as he had, but their final triumph is no more doubtful than was his.—Your obedient servant,

"A. GOFF."

VIVISECTION AND ITS DEFENDERS.

(FROM THE "ACCRINGTON OBSERVER," JANUARY 8TH.)

"SIR,—I have watched with much interest the correspondence in your columns on this question, and I should be glad if you would permit me to point out to Mr. Ruddle and others why Anti-Vivisectionists oppose scientific cruelty especially. We all admit that horses and donkeys are often treated with great cruelty in our streets. We admit and are greatly pained to know that much cruelty exists in farmyards and slaughter houses. But most of us Anti-Vivisectionists are doing our utmost to stop these forms of cruelty and to educate the public mind in the direction of justice and mercy to the lower creation. But Vivisection is on another plane altogether. Drivers, costermongers, and others, who are cruel to animals do not meet in class and lecture rooms to receive instruction in the best methods of keeping creatures alive and sentient whilst subjecting them to dissection of their living bodies. These cruel and ignorant persons do not pass their lives in the invention of ever newer and more awful forms of torturing dumb animals. They do not write essays and books to teach young men and women how to extract the maximum of agony from a dog or cat with the minimum of inconvenience to themselves. This is what the Vivisectors do, and this is why we call it a diabolical sin. Possibly Mr. Ruddle does not know these facts; if he doubts my veracity I shall be happy, with your consent, to enlighten him.—I am, Sir, yours, etc.,

"EDWARD BERDOE, M.R.C.S., etc."

"London, December 31st."

VIVISECTION IN HOSPITALS.

We reprint the following letter, slightly abridged, from the *Christian*, of January 6th:—

"SIR,—At the recent annual meeting of the Metropolitan

Hospital Sunday Fund, the Lord Mayor ruled out of order an endeavour, in connection with the resolution to 'invite the cordial co-operation of all ministers of religion . . . in the usual way' to call attention to the increasing practice of vivisection in the hospitals as a difficulty in the way of such co-operation. On this ruling, a gentleman who sat beside the suppressed speaker exclaimed, 'But that will have to be heard,' and I venture to anticipate, through your courtesy, a speedy fulfilment of that prediction.

"The 'Vivisection Act' of 1876 was passed in pursuance of the recommendation of a Royal Commission which recognised the right of the community to be assured that the claims of the lower animals to be treated with humane consideration should not be forgotten; and it reported in the following remarkable terms: 'Where the pursuit of scientific truth and common compassion come into collision, the ends of civilization no less than of morality require us to be guided by the latter and higher principle.'

"Yet the legislation based upon this report has only sacrificed the animals and deceived the public. Licences are easily obtained, inspection is nominal, and anaesthetics are little used. The number of licensed vivisectors in England and Scotland was forty-four in 1883; in 1897 there were eighty-seven attached to the London hospitals alone. In the first year under the Act 164 operations were performed without anaesthetics; in 1895 the number of these was 2,845. Over 80 per cent. of the vivisections in 1896 were under 'exceptional certificates,' which remove all restriction upon the tortures inflicted. An additional and closely related horror is the increasing habit of experimenting upon hospital patients, physicians and surgeons who do so being freely and honourably named in medical publications.

"And in full view of these things the public is charged in the name of science to be silent. But if this were only a question of science, we should be entitled to refer to the opinions of the leaders in science who have condemned vivisection as worthless and unjustifiable.

"But on moral grounds we have a right to speak without any deference to physiologists. We maintain that man's authority over creatures as sensitive as himself is limited by one common Creator; that the refusal to recognize this limitation is as immoral as theft; and that the arrogant selfishness which prompts it, while it threatens the poor in our hospitals, is destructive of humanity in the operators themselves. The late Rev. Samuel Haughton and others have said that these experiments in the presence of medical students are 'calculated to make them young devils.' Surely as parents and as citizens we have a right to protect our young men from such an influence as this! Let the churches generally insist (in accordance with the terms of the Royal Commission of 1876) on the maintenance of common compassion as more important to civilization and morality than even the pursuit of scientific truth, and the Metropolitan Hospital Sunday Fund will be liberated from a debasing connection and will evoke new enthusiasm from all compassionate minds. But if that cannot be secured, let those who fear to be, even by their contributions, 'partakers of other men's sins,' keep their collections for those hospitals in which vivisection has no place.—Yours truly,

J. F. B. TINLING."

MORE VIVISECTION HORRORS.

(FROM THE "CHRISTIAN," JANUARY 20TH.)

"SIR,—Your correspondent, Mr. Tinling, justly says, 'On moral grounds we have a right to speak without any deference to physiologists.' Not only have we a right, but it is our duty to protest against the prevalent invasion of our hospitals and asylums by vivisectors. The rage for experiment consequent upon the fascinating study of bacteriology and the introduction of various animal extracts in the treatment of disease, have opened up a vast field of research, of which the experimenter is certain to take advantage because of the apathy of all classes of the people in matters pertaining to medical education.

Our great hospitals are like the Chinese Empire—everyone who is strong enough and sufficiently daring seizes such territory as he desires for the purpose of his own advancement!

I called the attention of the Press a few weeks back to the incredibly cruel and murderous experiments of Professor Sanarelli, who recently carried out a number of experiments

on healthy human beings in the quarantine station on the Island of Flores, near Monte Video, with the culture-germs of yellow fever. He injected the virus of this terrible disease into five persons, and they all died with the typical symptoms of yellow fever. I have been endeavouring to learn the names of these unhappy victims of science, but all I can discover is the following statement in the *Monte Video Times*, a paper which is very much annoyed at the popular indignation aroused by the exposure. It says that of the five victims—

"One was a condemned criminal who voluntarily submitted himself on condition that he should be pardoned if he survived, and that the others were incurable pauper lunatics who in a more advanced stage of civilisation will probably be submitted mercifully to a lethal chamber!"

The writer continues that Sanarelli's alleged discovery "was quite worth the sacrifice of any number of animals, and even of some human beings."

The toleration of the vivisector in the hospital ward means the recognition of the right to experiment not only on the lower animals but on the persons of our poor brethren who are the objects of our charity, and should be of our loving solicitude.

To tolerate experiment in the hospital ward is to recognize the right to murder in the interests of science. The public do not consent to all this explicitly, but implicitly they permit it when they allow licensed avowed vivisectioners to prowl about our great cathedrals of healing.—Faithfully yours,

"January, 10th. EDWARD BERDOE, M.R.C.S."

FOREIGN INTELLIGENCE.

UNITED STATES.

At the November meeting of the Illinois Society, it was resolved "that the Illinois Anti-Vivisection Society hereby enters its protest against the proposed elimination of the vivisection debate from the program of the Congress of Animal Protection Societies, to be held in Paris, in 1900, as evading one of the most important questions for consideration in the whole range of the subject of cruelty to animals. The resolution was passed unanimously. (Subsequently a letter with copy of the resolution was forwarded to the General Secretary, Dr. Julius Szalkay, Buda-Pesth, Hungary.)

VIVISECTION NOT PREVALENT IN THE SOUTH.

For some time, Mrs. Sara Thorpe Thomas, Vice-President for Arkansas of the Illinois Anti-Vivisection Society, has been making inquiry by letter to numerous educational institutions in the South, medical and otherwise, as to the prevalence of vivisection among them. She has received many gratifying responses to the effect that, in some, no vivisection whatever is practised and in others very little. Many of these replies expressed full sympathy with our work and all were uniformly courteous. The writers had taken special pains to make inquiry and answer the writer as she desired.

A LAW PROHIBITING VIVISECTION.

From Louisville, Kentucky, came the most gratifying response of all, to the effect that in that state vivisection was prohibited by law. We give the letter of the President of the Kentucky Humane Society as follows:—

"Louisville, Kentucky, September 27th, 1897.

"Dear Madam,—I am not able to give you information in the matter referred to outside our own State. Our medical colleges in this city do not practice vivisection and our Humane Society has been able to get a law passed in our state against that practice. If it is done at all it is done secretly. In addition to being the president of the Humane Society, I am also Secretary of the Board of Regents of the Kentucky School of Medicine, one of our leading colleges. I know that it is not practiced in that school, and I am very sure it is not practiced in any of our medical colleges.—Yours truly,

"JOHN H. LEATHERS."

The Editor of *Anti-Vivisection*, from which we take the above, adds:—"The people of the South have reason to be

proud of this record, and it is profoundly to be hoped that it will be religiously maintained," in which we heartily concur.

ADDRESS AT PHILADELPHIA BY MRS. WHITE.

"Vivisection in its Relation to the Peace Movement" was the subject of an address delivered one evening lately by Mrs. White before the Peace Society at its hall, at the corner of Fifth and Chestnut Streets. The *Philadelphia Press* of the next day, in speaking of the lecture, said, "Mrs. White displayed a thorough knowledge of the subject of vivisection, so far as its practice on animals is concerned, and made an earnest plea in behalf of humanitarian principles."—*Journal of Zoophily*, January.

THE NEW ENGLAND ANTI-VIVISECTION SOCIETY.

The New England Anti-Vivisection Society met in Boston on the 4th ult., and re-constituted itself for the year by the election of officers, Mr. Philip G. Peabody being made president, Dr. Elliott Preston vice-president, and Mr. Joseph M. Greene treasurer.

The business for the year just passed was stated to have been entirely satisfactory to the officers of the Society. The work had progressed on the same general lines as in the former years. Increased interest had been shown, and more literature had been printed and circulated than in any other year.

The balance on hand at the beginning of the year just passed was \$517.42; the income from donations \$784.50, from membership fees \$541.84, from subscription to monthly literature, &c., \$212.45; total, \$2056.21. The total expenses had been \$1330.10, leaving a balance in hand of \$726.11.

GERMANY.

NEW ANTI-VIVISECTION SOCIETY IN BERLIN.

A very promising branch of the World's League against Vivisection has been formed in Berlin with Dr. Lutze as president. At the first meeting held on November 11th, Dr. Förster delivered a stirring address to a large audience. Many distinguished ladies who have been active in our cause for some time past have joined the new branch of the League, and amongst them Frau Professor Oppler, Fräulein Lili Lehmann, the well-known singer, and Frau Vilma Parlaghy, portrait painter, whose letter to the Prussian Minister of Education we publish below. The rules of the Branch are very simple. Anyone who is in sympathy with the principles of the League may join. There is no entrance fee, and all subscriptions are voluntary. The Council is elected at a general meeting of the Branch, and consists of a president and nine members (three ladies and six gentlemen) with power to double their number, the same proportion of ladies to gentlemen being maintained. Members can also elect an Auxiliary Council, and honorary and corresponding members. This Branch of the World's League is also affiliated to the Dresden International Society, and recognizes the *Thier-und Menschenfreund* as its organ. We wish it every success and a prolonged career of usefulness.

A POWERFUL AND PATHETIC APPEAL.

We learn from the *Thier und Menschenfreund* that the well-known German portrait painter, Frau Vilma Parlaghy, who has joined the recently-formed Berlin Branch of the World's League against Vivisection, has addressed the following letter to the Prussian Minister of Education:—

"Permit me to bring before the notice of your Excellency a matter which has seriously engaged my attention and much troubled me for some time past, a matter also which I have often discussed with highly cultured men and noble women, with the result that, guided by the same high principles, we have found ourselves as regards this matter, in perfect accord. I refer to the question of vivisection. Vivisection is strongly condemned and opposed by numerous men of position, character, and judgment, spiritual leaders of the people, men of all stations and professions, and of all political and religious or philosophical opinions. In particular it is incomprehensible to them how such a disgraceful method of scientific investigation can be suffered to exist in a country which prides itself on its justice, on its civilization, and, it sounds almost like irony, on its Christianity. Nevertheless, this thing is practised, and its practice extends more and more. In our colleges it is done under the protection of the Government, and supported by the

people's money. And this without let or hindrance; for it is well known that the regulations of your predecessor, Herr von Gossler, with regard to it remain, and necessarily must remain, without any practical result. When, where, and to whom, indeed, are these regulations made known, where and by whom are they impressed upon the students concerned, or their teachers? Who superintends their enforcement and what punishment follows their infringement? Who in short is guided by them, or what evidence is there of the slightest improvement or change in consequence of their introduction? They are but sand thrown in the eyes of those who are of simple faith or of too easy conscience.

"We believe that we are only obeying the imperative command of justice and humanity, when, impelled by righteous anger, we strongly, passionately, and without ceasing impress upon the rulers, lawmakers, and people, the dreadful abomination perpetrated in the practice of vivisection, by which nature is defiled and man dishonoured. To us it is a crime against all law, human and divine and without the slightest justification, a most glaring example of the principles of unprofitableness now so prevalent—we mean principles subversive of all that is of true and lasting worth. Our opponents, indeed, delight to speak of the benefits we have received from the horrors of vivisection, and even go so far as to state that the very existence of the human race depends on the practice of that which they themselves confess to be inhuman and brutal. What a distressing comment is this on their belief in the divine wisdom and forethought! We are totally opposed to their principles, quite apart from the truth or untruth of their statement that vivisection is indispensable for the study of physiology and the cure of disease. This statement, however, is strongly disputed even by medical experts, who believe that this method of investigation leads only to error instead of to the knowledge of truth. Our objection is that whether the deductions made from experiments in vivisections are true or false, the result is out of all proportion to the incalculable and irreparable damage done to the soul of man by the crime committed. As in the old days the sophistry that the welfare of man can be attained by such despicable means is met by the words:—'For what is a man profited, if he shall gain the whole world, and lose his own soul.' A crime is none the less a crime, and should not be permitted, because it would hide its identity under the cloak of doing evil in order that good may come. Vivisection is a threefold crime; first against the helpless, innocent victim, barbarously tortured to death, then against man in shocking the noblest feelings of his nature, and finally against the goodness of God by so vile a misuse of the reason with which He has blessed us.

"It is with grief and pain that all far-seeing men think of the thousands of talented students full of hope and promise who are brutalized, so that their hearts become hardened and their consciences deadened, through the unnatural training they receive. Facts have only too often proved the baneful effects of the training of the medical student. It is also evident that among large classes of the people there is not only a deep mistrust of medical skill, but also a doubt in the existence of that sympathy which ought to subsist between doctor and patient. The medical art, based chiefly on vivisection, and practised therefore by men, who it is feared would not scruple to use man himself for the purposes of experiment, has fallen into disrepute, and on that account people trust more and more to what is known as nature's cure. There is a strong tendency, therefore, on the part of the people for whose welfare the vivisector professedly works, to indignantly reject his services, and it will be our endeavour to encourage this tendency by spreading light in dark places upon this question of vivisection. The people are more conscientious, nobler, and more merciful than they are thought to be, and often more so than many of the higher classes.

"Pardon, your Excellency, my plain speaking on this matter, which is due to its seriousness and its far-reaching effects. As a woman, it touches me deeply, and I must express what I feel. As an artist I am shocked to see the beauty and harmony of the creation brutally and senselessly disorganized and destroyed. In whatever light we look at vivisection we find it condemned, and it will appear to our descendants, spiritually and morally, as a disease from which our civilization a long time suffered. Permit me to put two questions to your Excellency, (a) Have you ever thoroughly and earnestly considered this question? (b) Have you any knowledge of that which happens behind the well-closed doors of the physiological and medical institutes, which are nominally under your supervision? With what refined, one might almost say, wanton cruelty, are the instruments and the rack arranged by means of which a poor creature will be tortured to death—how fiendish the cruelty of using curare, a drug which the most infamous vivisectors, such as Claude Bernard, with unconcealed cynicism, confessed produced the most dreadful suffering ever imagined by man—and this same curare is used to take away from the animal all power of motion while the sense of pain continues to exist in

the highest degree. Among the many tortures I would mention are: the insertion of red-hot needles, boiling or artificially freezing the interior as well as the exterior portions of the animal's body, starving, sticking hundreds of needles into the stomach, leaving without water, boring holes in and sawing through the living body, or letting portions of it decompose; and as the crowning cruelty of all, skinning animals and preserving them artificially alive for months for the purpose of some other horrible and unheard of experiment. Your Excellency can hardly be aware of these things, otherwise I and thousands of others feel convinced you would not have allowed one moment to pass without doing your utmost to remove this horror from the face of the earth. In this manner I have repeatedly spoken with those who are thoroughly acquainted with the subject, and I have considered it again and again after reading the best writings on it, by leading thinkers and experts, which have appeared during the last ten years. Everywhere I find the same opinion expressed that vivisection is a stigma which we have allowed to remain too long, and which sooner or later must be removed by law or by some strong measure on the part of the executive. As the twelfth International Congress of Societies for the Prevention of Cruelty to Animals resolved by 177 votes to 17, 'Vivisection must be prohibited and made punishable by law.'

"When I last had the pleasure of meeting your Excellency, I had already determined to make this appeal to you, but I did not feel myself then sufficiently well informed. Since that time, however, I have further and fully investigated the question, and am thus encouraged to express freely my firm conviction thereon. Your Excellency will put me under a great debt of gratitude if you will give this matter your earnest consideration (I have taken the liberty of sending you herewith some works on the subject), and afterwards, grant me an opportunity of talking the matter over with you. If you then wish to know more about it, I shall be glad to give you the names of others to whom you may grant the favour of an interview. I believe I am fulfilling a sacred duty in bringing this matter to the notice of your Excellency. In the name of many thousands, I earnestly entreat you, with clasped and uplifted hands, not to put this appeal lightly aside, but to lend us your strong arm to oppose and put an end to this abomination born of unrighteousness, which has all too long been suffered to exist."

THE LATE FRAU BERINGER.

We have only lately heard of the death, which occurred in October, 1897, of Mrs. Beringer, who, with her husband, was an untiring worker in the cause of kindness to animals. In addition to this she was a refined and gifted authoress. Her work, we are assured, was productive of much good and has been richly blessed. She devoted the whole of her time, her talents, and her fortune to the cause of mercy. How great a loss to her husband—who is stated to be becoming more and more the centre and rallying point of the movement for the protection of animals in Germany—and the Cause the death of Mrs. Beringer was, may be conceived from what we have said.

The *Thier und Menschenfreund* publishes as a supplement a leaflet written by Herr Hans Beringer in memory of his wife. In this it is stated that about an hour before her death she asked for pencil and paper, and what she then wrote is reproduced in the leaflet in *facsimile*. The writing is firm and very legible, and is to the following effect:—"Shortly before my last hour I send a kind greeting to my friends and to all good men and women and ask them to continue the work of my life. In particular I would ask them to take special care that in the schools, the spirit of mercy and compassion towards animals shall be awakened and cultivated in the hearts of the children; then it will not be long before mutual sympathy and a readiness to aid one another will show an increase amongst men."

FRANCE.

ANOTHER PASTEURIAN VICTIM.

The following particulars of the case of another victim of Pasteurism appeared in the English papers under date of Roubaix, January 6th. A weaver named Laporte has died here from hydrophobia, after terrible sufferings. He was bitten by a dog on July 3rd last, and immediately underwent a course of treatment at the Pasteur Institute at Lille, from which he was discharged as cured some weeks afterwards. His health continued good until December 31st, when he was suddenly seized with all the symptoms of hydrophobia in its most terrible form, and finally succumbed to the disease.

INDIA.

THE PROPOSED PASTEUR INSTITUTE.

The *Delhi Morning Post* (November 27th, 1897) commented on the proposal to found a Pasteur Institute in India in the following outspoken terms:—"The Indian Anti-Vivisection Society is making out a very strong case against the establishment of a Pasteur Institute in this country, and we should think that there can be no question that native opinion is unanimously unfavourable to the proposal. It is very difficult to gauge the view that the supreme and local Governments take of the matter. Lord Sandhurst's recent pronouncement may be read any way. It pledges the Bombay Government to nothing, and is, therefore, no more satisfactory than previous replies to questions regarding the Institute that have been addressed to the authorities. The time has surely arrived when something definite might be said. The movement was started years ago by an Anglo-Indian journalist, and it seems to have made not the slightest advance since he severed his connection with this country. Why, then, should it be kept open—a cause of continued irritation to those who feel very strongly on the subject, and the means of increasing the enormous volume of feeling that was aroused from the date the project was launched? Native opinion is so united about Pasteurism, and regards with such abhorrence the possible establishment of an Institute in India, that we should think it would be well if the Government made up its mind to wash its hands of the thing without further delay."

PARIS.

THE PASTEUR INSTITUTE.

In a signed article in the *Journal de Médecine de Paris*, which he so ably edits, Dr. A. Lutaud lately published the following comments on "The Pasteur Institute and the Budget":—

"One of our *confrères* of the political press who has had the curiosity to cast his eye over that very big book of the French Budget which our deputies skim with so much unconcern, makes known some pearls of information which he has gathered from the chapter relating to the Fine Arts. People had not pictured to themselves that the Pasteur Institute, which was believed to be supported entirely by private funds and by the sale of its sero-pharmaceutical specialities, is one of the thirstiest of leeches attached to our Budget. Thus, the Institute stands in the Department of Fine Arts for sums of importance; for instance, £2,000 for the expenses of gardening! But the Pasteur Institute does not limit itself to getting its name on the vote for Fine Arts—£2,000 for it is a bagatelle—it also receives considerable sums from the votes for Public Instruction, for the Interior, for the Municipal Council, etc. It has the use and enjoyment of the grounds of St. Cloud, which if they were let at a rent would produce a large income. Again, the Pasteur Institute is a commercial establishment which has recourse to the publicity of the *Figaro* and the *Petit Journal* with the view of promoting the sale of its products. £2,000 for the purpose of making flowers grow for the gratification of the Marmorecks, therefore, appears to me rather 'stiff.' When Behring invented the anti-diphtheritic serum it was understood that a German house of business was entrusted with the duty of selling and exploiting it; Koch pursued a similar course in regard to his tuberculin; why has not Dr. Roux followed their example? I do not see why French tax-payers should be imported into an enterprise purely commercial; there is no more reason for voting subventions to the serums of Behring and Marmoreck than there is for inscribing on our Budget an enterprise to provide a soothing draught for the Shakers."

CAN A DOG REASON?

BY WILLIAM STEVENS PERRY, BISHOP OF IOWA.

We take the following interesting study in animal psychology, from the December issue of *Our Dumb Friends*, the very ably edited and interesting monthly of the American S.P.C.A., of New York, who are good enough to send us copies of it regularly as it appears:—

Elcho, reddest of red Irish setters, is a dog of high degree.

His very name indicates his noble birth. His pedigree is in print and tells of his parentage and earlier descent. Born at the Belmont kennels, his parents were of the famous Lord Elcho strain known and noted beyond the sea. The register records the "bench" prizes taken by his progenitors here and in their ancestral domain; and Elcho—with whom we have maintained many a one-sided conversation on the well understood principle, recognized by men and dogs alike, and expressed in the phrase "*noblesse oblige*"—looks wise and knowing. When we chat with him of his noble birth, he nods his head and wags his tail with profound respect for his lofty lineage. Lord Elcho is both high-born and beautiful. The burnished gold-tintings of his fine silken red hair; the exquisite contour of his sharp-cut and expressive face; the love and grave appreciation he throws from time to time into his melting, liquid eyes; his grace of movement; the magnanimity of his treatment of others of his kind; his daintiness of appetite; his consciousness of the possession of every virtue, every intelligence, every requisite for compelling notice and admiration and winning regard and loving care;—all these make him "the observed of all observers." Among his fellows, he walks a king. His master—the bishop—finds respect in certain quarters of the see-city, among sportsmen and with dog-fanciers at least, because of his proprietorship of this prince of Irish setters whom all the children love for his gentleness and whom adults admire for his beauty and grace. Elcho—the noble and the great—who knows all this and will not abate to any one aught of a due recognition of his dignity and self-respect, quite patronizes the bishop, and accepts his devotion and that of the family as a tribute well deserved. After an absence on visitation, Elcho's welcome has been a joyous bark, and then with a leap into the bishop's arms, he has put his velvety front paws on the bishop's shoulders, covering his face with kisses and looking into his eyes with a strong, unflinching love. Elcho does not believe with Shakespeare that "parting is such sweet sorrow," and this welcome is in marked contrast with the breaking up of the household at vacation time when Elcho knows that he is to be left behind. Elcho's spirits are sorely tried when the robe-case and wraps in the vestibule, or the luggage scattered about the upper hall, indicate the departure of the bishop or the family for a longer or a shorter absence. Then Elcho's paws have to be held by the hour. His eyes are filled with tears. He talks,—dog wise, of course,—with evident disapprobation of the temporary breaking up of the household. But when he finds that his remonstrances are in vain, he accepts the inevitable; with a merry bark, he speeds the departing ones, and directly re-establishes his connections with his many friends in and around the Cathedral Close,—dropping in at one favorite home for the first breakfast, then calling on the pretty little niece of the family cook, who is always ready to hold his paw and has always a lunch in store to tempt his appetite. So the days go on. He is never at a loss for a welcome or a meal. At night he finds a lounge on which to sleep the hours of dark away, or else, when the fit is on him, he shares the kennels of some other pampered dogs who are his friends. Sometimes the longing for adventure seizes him, and he takes a trip into the country. Now and then he craves a little sport with some hunting party, and then his thorough training is apparent, and heredity "tells." Every one has a kind word for Elcho, and the bishop's red setter is the pet of three cities,—connected by ferries, rail, bridges, and now and then by the smooth, firm ice-bridge reached between Davenport, Rock Island, and Moline.

The fall of a span of the great bridge across the Mississippi during its enlargement last winter seriously interrupted communication between Rock Island and Moline on the one side, and Davenport on the other. Foot passage was stopped, as well as crossing by carriage or rail, although the trains, after the first few days, crept slowly across the temporary "false work," a local train running at intervals of an hour to accommodate the residents of the three cities. The steam ferry plied between the Iowa and Illinois banks till the formation of the ice bridge, over which men walked or drove at will.

One of the bishop's household had found attractions across the river, and on his frequent visits to the twin-city was generally accompanied by Elcho, who with lordly dignity had

from time to time made the acquaintance of other dogs whom he had met across the river. As the young man passed through the streets on the wintry day whose history we propose to recite, Elcho lingered behind. He was evidently feeling the cold keenly,—it was a bitter day,—and although he had come over the Mississippi well sheltered by the straw on the floor of one of the hacks running between the banks of the river on the ice-bridge formed the night before, he had evidently in mind the delights of the open fire in the bishop's study and the comforts he had left behind. To these he now purposed to return, and he dropped behind at the first street corner. He was not missed at first by his companion, whose mind was on other thoughts intent; but when it was time to return Elcho had disappeared. The bishop's dog was known to the police, as well as to people generally in the three cities, and his loss was at once reported to the chief, who proposed a "general call," as soon as the dog's loss was fully assured.

The rest of this story can best be told after the manner of Wilkie Collins by the narratives of two unprejudiced and veracious observers. The first, a Davenport, testifies as follows: "I have often seen and admired the bishop's dog, and on the biting afternoon in question had I been crossing to Davenport in place of attending to some important business in Rock Island, I should have taken Elcho over the river, as the dog evidently desired me to do when we met on the bank. The dog looked so wistfully at me that I stopped to watch him as he scanned the faces of the passers-by. Then, as if conscious of his failure to secure an invitation to ride, and having no money to pay his fare, he evidently recalled the comfort left behind at home, and turning from the river bank he disappeared from sight in the direction of the railroad station, some blocks away. This is all I can testify, and but for the evident disappointment of the dog in finding no one to take him over the ice-bridge, and his evident determination, after reflection, to try another way, I should have forgotten the circumstance."

The Rock Islander at this point takes up the story:

"You ask me, Bishop, what I can tell you of your dog's procedure at the Rock Island and Davenport railway stations when we were fellow-passengers by train across the 'false work' of the bridge one afternoon last winter.

"I remember the day, bright, but chilly—so cold that I did not care to venture over by the ice-bridge, but took the train instead. As the single coach for this local service drew up at the station, I noticed your dog. After looking, and with evident disappointment, into the faces of the intending passengers, and finding no one to take him over the river, he seized the last moment when the trainmen were at the further end of the coach helping the people to their seats, and with a bound cleared the steps of the platform and disappeared under a seat. I became interested in this episode, knowing that the dog would be put off from the coach if seen. As I passed the seat under which Elcho had concealed himself, I noticed his look of recognition, coupled with a deprecatory request—that I would not 'give him away,'—and I did not. The tickets were collected. The trainmen came and went, and I resolved to await at the Davenport station the end of this stratagem of the dog who was 'beating' his way over the frozen river without chilling his dainty feet. At length the passage was made. Elcho did not move at first. The passengers naturally left the coach by the end nearest the street and farthest from the spot chosen by the dog. Elcho slyly took in the situation, waited till the conductor and brakeman were occupied in handing the women and children out, and then, with a yawn and a stretch, made a leap for the unattended door, sprang from the platform, and sped on his way to the bishop's house, without a glance behind.

"I had seen enough to start a train of thought in my mind. Can dogs reason, plan, forecast contingencies, take risks after deliberation, and in the prosecution of their purposes arrange to hoodwink the higher intelligence of man?"

It was little more than an hour since Lord Elcho had left the bishop's house. The dog was luxuriously stretched before the study fire when a telephone call was heard: "Is Elcho at home?" "Yes," was the reply, and the chiefs of

police of the three cities who had been in consultation as to the missing dog and the need of a "general call," concluded that there was no need. The bishop has since paid the dog's fare across the river.

CORRESPONDENCE.

"CATHOLICISM AND VIVISECTION."

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Mr. Collinson writes in the December number of your journal on the attitude taken by Monsignor John S. Vaughan towards vivisection in his book, "Thoughts for all Times." Will you kindly permit me to say a few words thereon?

It is one of those ethical paradoxes with which the human mind constantly presents us, that the two classes who most strongly defend vivisection are materialistic evolutionists, and their extreme psychological opposite—Romanists. The former, regarding man as merely an improved ape with no relations beyond this passing scene, consider he is justified in availing himself of every means possible to make that brief period as pleasant as he can to himself and his descendants. The latter, through accepting the dogmas of their Church, which is a human institution, as of higher authority than those eternal principles of mercy and love, which are the all-encircling attributes of God Himself, and which therefore transcend all creeds. Thus, the late Pope Pia Nono, said that animals had no rights. His dictum, however, seems diametrically opposed to the teaching of Divine Revelation. For example, in the last verse of the Prophet Jonah, where the Almighty reasons with the rebellious prophet whose selfish vanity would rather sacrifice the penitent inhabitants of the great city Nineveh than that his prediction of its destruction should fall through, we have the following beautiful expression of Divine sympathy extended to animals:—

"Then said the Lord, thou hast pity on the gourd, for which thou hast not laboured, neither madest it to grow; which came up in a night, and perished in a night; and should not I spare Nineveh, that great city, wherein are more than six-score thousand persons who cannot discern between their right hand and their left hand, and also much cattle."

Transcendent is the humanitarism, the infinite tenderness of motive, herein displayed. It was the most helpless of the population of Nineveh that moved the Divine compassion, the little children who could not discern between their right hand and their left hand; the nestling babe, the little pattering feet, the bright, open countenances where sin had not yet set its brand; and the lowing kine, the bleating herds, the noble horses, and all the helpless dependent animals with no one to plead their cause; these were the objects that awayed the All-Father's mercy.

In view of such a passage as this, it is difficult to see how a religious system which claims to found its dogmas upon Scripture can possibly defend vivisection.

I am, Sir, yours truly,
M. L. JOHNSON.

Baker Street, Weston-super-Mare.

ANTI-VIVISECTION HOSPITAL FUND.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Will you allow me the publicity of your columns to explain that the National Anti-Vivisection Hospital, now in contemplation, is the only scheme that makes the exclusion of vivisection from its staff and of vivisection from its schools its sole object, apart from the relief of the suffering poor.

I wish to mention this in order that subscriptions should not be diverted.

I remain, yours faithfully,

J. L. UNIACKE,
Secretary *pro tem.* Auxiliary Hospital Committee.
32, Sackville Street, W., 16th January, 1898.

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M. PASTEUR'S QUADRUPLE HECATOMB.

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THE TALE OF THE 373 DEAD.

[CORRECTED TO JANUARY 20TH, 1898.]

IMPORTANT TESTIMONY AS TO THE ACCURACY OF THESE STATISTICS.

Q. 2057.—Was this supplement to THE ZOOPHILIST of 21st [1st] July, 1887, giving details as to M. Pasteur's Necrology, before you when you were on the Pasteur Commission (handing the same to the witness)?—Yes, I think we had this statement before us.

Q. 2058.—Do you know whether it is accurate?—I believe it is; it seems to me to have been drawn up with great care.—Extracted from the Evidence of Dr. Lauder Brunton—Report of Lords' Committee on Rabies in Dogs, 1887.

N.B.—It has been claimed on behalf of Pasteur that on dogs the success of his method was invariable. Had the analogy between dogs and mankind, therefore, been perfect, it should never have failed with the latter. It does fail, and so the experimental basis is discredited; but it is sought to rehabilitate it by saying that the average mortality is small. When persons bitten by dogs only suspected of being mad, and even those merely licked by dogs, are reckoned among the total treated, and a good many actual deaths are discounted, it is easy to make a low average. The honesty of the process is, however, another matter.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.	
			BY	ON				
INOCULATED IN PARIS.					1885:	1885:	1885:	1885:
1	Jacques Bonenfant...	Hospital Lariboisière, Paris	Dog	Aug. 30	Sept. 1	Sept. 7	<i>Journal de Médecine de Paris</i> , December 19 (1886.)	
2	Louise Pelletier ...	Paris ...	Dog	Oct. 3	Nov. 9	Dec. 4	<i>Intransigeant</i> , December 8.	
					1886:	1886:	1886:	1886:
3	Mathias Kakulev (or Kajoronoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	Mar. 23	Died at Hotel Dieu, Paris; <i>La France</i> , March 24	
4	Wladimir Phenogenoff (or Ivanoff) ...	Russia ...	Wolf	Mar. 1	Mar. 13	April 3	Died at Hotel Dieu, Paris; <i>Evénement</i> , April 4.	
5	Peter Wasiliev Golowinski	Russia ...	Wolf	Mar. 1	Mar. 13	April 7	Died at Hotel Dieu, Paris; <i>Intransigeant</i> , April 18.	
6	Dimitri Borowskoff...	Russia ...	Wolf	Mar. 25	April 5	April 20	Died in Paris; <i>Intransigeant</i> , April 22.	
7	Ivanovna Schtcherbakoff ...	Russia ...	Wolf	Mar. 25	April 5	April 22	Died at Salpêtrière, Paris; <i>Petit Journal</i> , April 25.	
8	A Woman (name unknown)	Wloekaveck, Russia	Wolf	...	...	May 31	<i>Ami du Peuple</i> , June 6.
9	(Name unknown) ...	Russia ...	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
10	(Name unknown) ...	Russia (at Moscow)	Wolf	...	...	June 1	<i>Ami du Peuple</i> , June 6.
11	Christin (aged 6) ...	Evian, Savoy	Dog	May 14	May 20	July 4	<i>Journal de Médecine de Paris</i> , July 18.	
12	John Gagu (or Gager) ...	Roumania ...	Dog	May 11	May 25	June 7	<i>Daily News</i> , June 7.	
13	(¹) Eloina Lagut (aged 11)	Dole, Jura ...	Dog	May 18	May 24	June 17	Exchange Company's Telegram, June 24.	
14	A Woman (name unknown)	Russia ...	Wolf	...	...	July 6	<i>Lancet</i> , July 31.
15	(Name unknown) ...	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Under	
16	(Name unknown) ...	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } Dr. Winow's	
17	(Name unknown) ...	St. Petersburg	Dog	May 3	May 14	July 11	<i>Journal de Médecine de Paris</i> , August 1. } care.	
18	Marius Bouvier (adult) ...	Grenoble ...	Cat	Apr. 30	May 4	July 21	<i>Le Temps</i> , Paris, July 22—25.	
19	A Boy (aged 13) ...	Dordrecht ...	Cat	June 18	June 25	Aug. 4	<i>Daily News</i> , August 10. (Paris correspondence.)	
20	(¹) Peytel, Henri (aged 6)	Polemieux, Rhone	Dog	June 28	June 30	July 17	<i>Le Petit Lyonnais</i> , August.	
21	A Young Man ...	Gatchina ...	Dog	...	...	Aug. 10	<i>Novoï Vremya</i> , Russian Journal, August 11.
22	(¹) Bergeron Cléidère (21 mos.)	Bordeaux ...	Dog	June 17	June 21	Aug. 17	<i>Daily News</i> , August 18. (Paris correspondence.)	
23	Josefa Pinta Santiago	Ferrol, Spain ...	Dog	...	...	Aug. 16	<i>Le Matin</i> , Paris, August 18.
24	A young woman (aged 14) ...	Reus, Spain...	Dog	July 5	...	Aug. 20	Madrid correspondence, based on <i>La Epoca</i> .	
25	Harry Collinge (aged 10) ...	Rawtenstall, Lancs.	Dog	July 6	July 15	Aug. 20	Manchester and London Journals, August 23.	
26-8	Three Patients ...	Spain ...	Dog	...	...	Sept.	<i>Correspondancia</i> , Madrid, Sept.
29	(¹) Moulis Andre (6 years)	Paris ...	Dog	July 31	Aug. 6	Sept. 8	<i>Journal de Médecine de Paris</i> , November 7.	
30	Zélie Leduc (70) ...	...	Dog	July 14	July 18	Sept. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.
31	Louis Grand (41) ...	France ...	Dog	Sep. 5	Sep. 14	Oct. 10	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.	
32	Duresset, Ed. ...	France ...	Dog	Aug.	Sept.	Sept.	Dr. Lutaud, <i>British Medical Journal</i> , April 2, 1887.	
33	(¹) Astier (2 years) ...	Paris ...	Dog	Aug. 4	Aug. 5	Sept. 16	<i>Journal de Médecine de Paris</i> , November 7.	
34	Mathieu Videau (8 years)	Villeneuve-d'Ornon	Dog	Feb. 24	Feb. 27	Sept. 24	<i>Le Temps</i> , Paris, October 2.	
35	(²) Moermann, a Gamekeeper	Sarthe ...	Dog	June 28	Aug. 11	Sept. 7	<i>Le Patriote</i> , Brussels, September 14.	
36	(Name unknown) } Bitten by a dog the property of Prince de Lucinge	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. } Admitted by Dr. Chautemps, Sorbonne, Oct. 10, 1886.
37	(Name unknown) }	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
38	(Name unknown) }	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
39	(Name unknown) }	(Vendée ...	Dog	...	...	Sept.	<i>Journal de Médecine de Paris</i> , October 3. }
40	(¹) Magneron Norbert (18)	Talence, Bordeaux	Dog	July 25	Aug. 1	Oct. 12	<i>La Science Libre</i> , Paris, October 24.	
41	Amélie Ozimska ...	Holbiele, Vladimir (Russia)	Dog	May	10th day	Feb., 1887	<i>Courrier de Varsovie</i> , February 17, 1887.	
INOCULATED AT THE PASTEUR INSTITUTE, ODESSA.								
42	Miroslaff Panoff (14) ...	Odessa ...	...	...	...	Within four mths.	} <i>Novoï Vremya</i> , September 14.
43	Tissenko (10) ...	Odessa ...	...	...	...	...
44	Jean Nowogiloff (12) ...	Odessa ...	...	...	...	...
45	(Name unknown) ...	Inhabitants of }	...	...	...	Within 4 mths.	} <i>Novoï Vremya</i> , September 14.
46	(Name unknown) ...	Kostroma }	...	...	...	...
47	A Peasant, name unknown. (64)	Odessa ...	Wolf	...	...	July 7	
48	Tyjnueho ...	Son Station-master, Lioubotinn	Dog	July 4	July 10	Aug 14	<i>La Semaine Médicale</i> (quoted in <i>Lancet</i> , August 21). <i>Journal de Médecine de Paris</i> , November 14.	

(¹) Admitted by M. Pasteur or Dr. Chautemps. (*Journal de Médecine de Paris*, November 7.)

(²) Jamin, another man bitten by the same dog, but not inoculated, also died.—

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1886:	1886:
49	Paul Potatkin (7) ...	Odessa ...	Dog	June 27	June 30	Aug 15	} <i>Journal de Médecine de Paris</i> , October 17, and <i>Intransigent</i> , October 18. } <i>Daily News</i> , Odessa Correspondent, November 2. } <i>Journal de Médecine de Paris</i> , November 7. } <i>Novoë Vremya</i> and <i>Science Libre</i> , November 7. Dr. Kessler, St. Petersburg.
50	Vassa Voropaiëf (16) ...	Odessa ...	Dog	June 27	June 30	Aug 22	
51	Mirochwichenko ...	Kharkoff ...	Dog	June 20	June 28	Aug. 3	
52	Ilynski ...	Odessa ...	Dog	July 7	July 7	Aug. 20	
53	Bolodinn (Simon) ...	Gagariinn ...	Wolf	June	June	Oct. 12	
54	Kushejow (peasant) ...	Odessa ...	...	...	July 15	Oct. 12	
55	Anastasia Bretschkow ...	Odessa ...	...	...	4 days after bite	Oct. 14	Dr. Kessler, St. Petersburg.
56	Popow ...	Belgorod ...	...	...	...	...	Dr. Kessler, St. Petersburg.
				1887:	1887:	1887:	1887:
57	Man (25) ...	Oster (Tscherni- } gov) ...	Wolf	...	...	...	} Submitted to the Intensive Treatment.— <i>Journal de Médecine de Paris</i> , August 28, 1887. } <i>Daily News</i> , Aug. 30; from its Odessa Correspondent. } <i>Daily News</i> , August 30; from its Odessa Correspondent. } <i>Daily News</i> , September 12; from its Odessa Correspondent.
58	Child (10) ...		Wolf	...	...	...
59	A Man (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
60	A Boy (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
61	A Boy (name unknown) ...	Caucasia ...	Wolf	...	...	Aug. 28	
62	— (name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	
63	— (name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	} <i>Daily News</i> , September 12; from its Odessa Correspondent.
64	A Girl (12, name unknown) ...	Caucasia ...	Wolf	...	...	Sept.	
				1888:	1888:	1888:	1888:
65	Maxime Schilla ...	Sebastopol (near) ...	Dog	March	March	March	<i>Novoë Vremya</i> , March 27th.
66	Nasar Ossatschenko ...	Odessa ...	Dog	...	...	July	<i>La Paiz</i> , Paris, July.
				1889:	1889:	1889:	1889:
67	Anton Monastersky ...	Kieff ...	Dog	May	May	May	<i>Odessa Zeitung</i> , June 2.
INOCULATED ELSEWHERE IN RUSSIA.				1886:	1886:	1886:	
68	Arthur Stoboi (boy) ...	Lublin ...	Dog	July	August	Nov. 23	<i>Riga Tageblatt</i> , December 21, 1886. The dog lived and appeared to be perfectly healthy.
69	Wassilieff (peasant) ...	Jakhnov (Pskow) ...	Dog	...	...	...	Inoculated at St. Petersburg.— <i>Journal de Médecine de Paris</i> , March 13, 1887.
				1887:	1887:	1887:	1887:
70	— (peasant, 28) ...	Pavlovo ...	Dog	Feb. 24	Mar. 4	Mar. 20	Dr. S. Warschawski, in <i>Russkaja Medicina</i> .
71	A Peasant (name unknown) ...	Kromy ...	Dog	July 25	July 26	Sept. 20	This peasant died of paralytic rabies, contracted at laboratory.— <i>Journal de Médecine de Paris</i> , Oct. 23.
72	A man (name unknown) ...	Circassia ...	Wolf	Aug. 1	Aug. 7	Sept.	} <i>Journal de Médecine de Paris</i> , October 23.
73	A Child (name unknown) ...	Circassia ...	Wolf	Aug. 1	...	Sept.	
74	A Child (name unknown) ...	Circassia ...	Wolf	Aug. 1	...	Sept.	
				1889:	1889:	1889:	1889:
75	(¹) W—, Helen (6) ...	Biela (Sjediz) ...	Dog	July 15	July 15	Aug. 9	Dr. Rodkewitsch, in <i>Russkaja Medicina</i> , September.
Submitted to the Intensive Treatment.				1886:	1886:	1886:	1886:
76	Joseph Goffi, alias Smith (26) ...	Brown Institution, London ...	Cat	Sept. 4	Sept. 6	Oct. 20	"His death was due to the virus of rabies."— <i>Report of Committee to Local Gov. Board</i> , 1887, p. vi.
77	Rovati, Luigi (30) ...	Modena ...	Dog	Sep. 12	Sep. 20	Oct. 23	<i>Journal de Médecine de Paris</i> , March 13 (1887).
78	(²) Clergeot-Moulin (27) ...	Paris ...	Dog	Aug. 7	Aug. 11	Oct. 24	Died at the Tenon Hospital, Paris.
79	Edward, cabman (34) ...	Versailles ...	Dog	...	...	Oct. 30	<i>Le Science Libre</i> , Paris, November 14.
80	(³) Wilde, Arthur ...	Rotherham ...	Man	...	...	Nov. 3	<i>Rotherham Advertiser</i> , November 6.
81	Sodini, B. (46) ...	Constantine ...	Dog	Oct. 12	Oct. 21	Nov. 24	Professor Peter (<i>Lancet</i> , January 15, 1887).
82	Rouyer, Arthur (12) ...	58, Rue de Bretagne, Paris ...	Dog	Oct. 20	Oct. 21	Nov. 26	<i>Journal de Médecine de Paris</i> , December 5, 1886.
83	Letang, père ...	Gourgeon ...	Dog	Nov. 3	Nov. 8	Dec. 8	Professor Peter (Letter to, from Dr. Pitoy).
84	Réveillac, Louis (20) ...	France ...	Dog	Nov. 4	Nov. 6	Dec. 21	<i>Bulletin de l'Acad. de Méd.</i> , Meeting, 11th Jan., 1887.
85	(⁴) Née, Leopold (42) ...	Arras ...	Dog	Nov. 12	Nov. 17	Dec. 17	<i>Journal de Médecine de Paris</i> , January 2, 1887.
						1887:	1887:
86	Jansen, Louis Victor (47) ...	Dunkirk ...	Dog	Aug. 19	Aug. 21	Jan. 1	Professor Peter (<i>Lancet</i> , January 15).
87	Gérard, Amédée (28) ...	Boran (Oise) ...	Dog	Dec. 1	Dec. 3	Jan. 3	Professor Peter (Letter to, from Medical Attendant).
88	Gariot, Paul (14) ...	Paris ...	Cat	Nov. 30	Dec. 21	Jan. 15	Drs. Boisson & Dangats. <i>Journal de Médecine</i> , Jan. 30.
89	Albert (woman) ...	Vallouise (Basses Alpes) ...	Dog	Dec. 20	Dec. 25	Jan. 5	Dr. Vagniat, of Briançon. <i>Journal de Médecine de Paris</i> , February 13.
90	Fonlup (30) ...	Tour du Pin (Isère) ...	Dog	Dec. 1	Dec. 12	Jan. 24	<i>Journal de Médecine de Paris</i> , February 6.
91	Bergé (40) ...	Bordeaux ...	Dog	July	3 days after bite	Jan. 30	Dr. Pitres made the autopsy and declared that the man died of hydrophobia. <i>Journal de Médecine de Paris</i> , February 6.
92	Alphand (woman, 42) ...	Madeleine (Paris) ...	Dog	Dec. 13	Dec. 20	Jan. 30	<i>Journal de Médecine de Paris</i> , March 18.
93	Saintes (child) ...	Maison-Carrée, near Alger ...	Dog	...	...	Feb. 24	<i>Journal de Médecine de Paris</i> , March 18.
94	Chavagnac, Louise (13) ...	Arbe ...	Dog	Oct.	Oct.	Mar. 10	<i>Journal de Médecine de Paris</i> , March 20 and July 31.

[NOTE.—The intensive method is abandoned about May or June, 1887.]

(¹) Other children bitten by the same dog, and not inoculated, survive; the dog disappeared. (²) Admitted by M. Pasteur or Dr. Chautemps. (³) Dr. J. H. Clarke's Opinion on Facts as reported: Death not due to hydrophobia, but probably to Pasteur's inoculations, the symptoms not being those of any known disease. (⁴) The dog in this case was pronounced not to have been mad.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
		[Spain		1887 :	1887 :	1887 :	1887 :
95	Sans Ramon	La Siréna, Badajoz,	Wolf	Feb. 15	Mar. 15	Mar. 20	Dr. Dujardin-Beaumetz. [Died under treatment.]
96	(¹) Ballasteros	La Puerta, Prov. of Jena, Spain...	Dog	Feb. 9	Feb. 20	Mar. 24	
97	A person (no name given)...	Navas de San Juan (Jena), Spain ...	Dog	...	...	Mar. 26	El Resumen, a Spanish journal, quoted in Journ. de Médecine de Paris, April 24.
98	(¹) A woman (41)	Baeza, Spain ...	Dog	...	...	Apr. 23	
99	Ph. Hydrum (56)	Sallèle, France ...	Dog	Oct. 5	Oct. 10	Apr. 17	Lancet, June 4, Paris Correspondence.
100	J. Hayden (8)	Thurles, Ireland...	Dog	Apr. 16	Apr. 19	May 19	
101	Valentin, Emile (16) ...	Reherrey (France)	Dog	Feb. 22	Feb. 28	July 27	Progrès de l'Est, quoted in Journal de Médecine de Paris, September 11.
102	Pénichaud (18)	Poulaines (Indre), France	Dog	June 12	June 14	Aug. 19	Dr. Bretheau (Valençay, Indre), in Journal de Médecine de Paris, September 4.
Under the Third Formula.							
103	Hurot, Paul (42)	Rue St. Bernard, Paris	Dog	May 29	May 30	July 4	Figaro, Paris, July 5.
104	Gachet, Jean Baptiste (25)	Vierzon (Cher) ...	Dog	Apr. 4	Apr. 10	May 2	Dr. Lutaud, Editor Journal de Médecine de Paris. Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
105	Cipriano, Rosario (42) ...	Torretta, Sicily ...	Dog	Mar. 13	Mar. 18	May 7	
106	Bourgeot, Jules	Audigny (Aisne) ...	Dog	Apr. 24	Apr. 28	July 11	Dr. Peter's Speech, Academy of Medicine, July 12. Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
107	Mangione, Andrea (82) ...	Palermo, Sicily ...	Dog	May 24	June 4	July 12	
108	Desclide (aubergiste) ...	Larocheffoucauld (Charente) ...	Dog	May 22	May 23	July 21	Journal de Médecine de Paris, July 31. (Supported by Dr. Nadaud.)
109	Jeule, Jeanne M. (57) ...	Arcezac (Hautes-Pyrénées) ...	Dog	Mar. 27	Mar. 29	July 21	Journal de Médecine de Paris, July 31. (Supported by M. Courrèges.)
110	Cahill, Martin (29)	Templemore, Ireland	Dog	June 14	June 27	Aug. 14	Standard (and other London papers), August 18. Times, August 27. Journal de Médecine de Paris, September 4.
111	(²) Doneraile, Lord (69) ...	Doneraile Court, co. Cork, Ireland	Fox	Jan. 14	Jan. 26	Aug. 26	
112	Kirkham, Albert E. (5) ...	Lancaster	Dog	July 18	July 26	Aug. 27	Daily Telegraph, August 30. Lancet, June 16, 1888. Roma, Neapolitan newspaper, Sept. 17 (confirmed by letter from the Syndic of Fiorano, October 5).
113	Cagarelli, Anna	Fiorano, Province of Modena ...	Dog	June 13	June 20	Sept. 12	
114	(Name unknown)	Portugal	Wolf	...	...	About Sept. 20	Daily Chronicle, London, September 23; from its Paris Correspondent. [The patients were treated in Paris.]
115	(Name unknown)	Portugal	Wolf	...	...
116	(Name unknown)	Portugal	Wolf	...	...	Sept. 21	Weekly Dispatch, September 25; Tablet, October 8.
117	Padre Luiz	Cabanos, Portugal	Wolf	July 5	Aug. 2		
118	(Name unknown)	Portugal	Wolf	...	...	...	The Commercio Portuguez, quoted in Journal de Médecine de Paris, October 23.
119	(Name unknown)	Portugal	Wolf	...	...
120	(Name unknown)	Portugal	Wolf	...	...	...	Dr. Hallade, in Journal de Médecine de Paris, Oct. 2. Manchester Guardian, October 5; also, British Medical Journal, October 15.
121	(Name unknown)	Portugal	Wolf	...	...
122	Jamnot (woman, 38) ...	La Garenne	Cat	Aug. 3	Aug. 4	Sept. 24	Journal de Médecine de Paris, October 23.
123	(⁴) Lindley, Fred. (26) ...	Cumberworth, Huddersfield ...	Dog	Aug. 1	Aug. 6	Oct. 4	
124	Saulat, Georgette (5 years)	35, Rue de Chau-fourniers, Paris	Dog	July 9	July 9	Aug. 4	Journal de Médecine de Paris, October 23.
125	Marchois (8 years)	Senlis	Dog	July 3	July 5	Aug. 16	Journal de Médecine de Paris, October 23.
126	Pliego, Joseph	Portugal ... ..	...	July	Aug.	Aug. 30	Journal de Médecine de Paris, October 23.
127	Palu, Eugénie (8)	Codalet, France ...	Dog	Sept. 1	Sept. 6	Oct. 10	Journal de Médecine de Paris, November 6.
128	Thierry, Paul (4)	Melleville, France	Dog	Sept. 1	Sept. 7	Oct. 15	Journal de Médecine de Paris, November 6.
129	Sintés, Edward (child) ...	Hussein-Dey (Algeria)	Dog	Jan. 19	Jan. 25	Oct. 17	Intransigeant, Paris, Nov. 21. [Inoculated in Paris.]
130	Cauvy, Dr.	Béziers, France ...	Dog	Sept. 30	Oct.	Nov. 3	Journal de Médecine de Paris, November 13.
131	(³) Vial, Rose (70)	Arles, France ...	Dog	Aug. 29	Sept. 5	Oct. 3	Journal de Médecine de Paris, December 11.
132	Valla	Salettes	Dog	Nov. 8	Nov. 13	Dec. 20	Semaine Médicale, February 1, 1888.
133-8	Six persons... ..	Treated at Turin	—	—	—	—	Relazione del Servizio Batteriologico, Turin, 1896.
139-40	Two persons	Treated at Naples	—	—	—	—	Risultata della cura antirabica Pasteur, Napoli, by Dr. A. Calabrese, Naples, 1896.
				1888 :	1888 :	1888 :	
141	Boy (4 yrs., name unknown)	Paris	Dog	Dec. 6	Dec. 12	Jan. 22	Medical Press, London, March 21.
142	Woman (52, name unknown)	Paris	Dog	Jan. 23	Jan. 29	Feb. 17	Medical Press, London, March 21.
143	Sidi-ben-Isral	Algeria	Dog	...	...	Mar. 18	Echo, London, March 19. (Death occurred at the Cochin Hospital.)
144	Marinot, Alphonse (soldier)	Paris	Dog	Feb. 15	Feb. 15	Apr. 1	Journal de Médecine de Paris, April 22.
145	S— (54, farrier)	Paris	Dog	Nov. 9	Nov. 11	Apr. 3	Journal de Médecine de Paris, April 22.
146	Denis, Cotte (28)	Thiers (Puy-de-Dôme)	Dog	...	Mar. 6	Apr. 12	Moniteur du Puy de Dôme, April 12.
147	Child (6½ years)	Paris ... Dôme)	Dog	April	April	April	Dr. Dujardin-Beaumetz.—Le Temps, Paris, May 4.
148	Poulet, M. (20)	Pecq, near Paris	Dog	Dec. 6	Dec. 8	May 16	
				1888 :	1888 :	1888 :	
149	Avray, Paul (11)	Boisguillaume	Dog	Apr. 12	Apr. 17	May 29	Le Petit Journal, Paris, May 31.
150	Olin, Eugene	Rue Curial, Paris	Dog	Apr. 23	Apr. 26	June 17	Annales de l'Institut Pasteur, Paris, July 25.
151	(⁵) Bertin (child, 18 months)	Gentilly	Dog	May 15	May 17	June 20	L'Intransigeant, Paris, September 10.
152	Villemain, P. (31 months)	Marseilles	Dog	May 9	May 14	June 23	Lancet (Paris correspondence), September 15.
153	Labeaume (37, labourer) ...	Châtenay	Cat	May 29	May 30	July 6	Lancet (Paris correspondence), September 15.
154	A man (name unknown, 28)	France	Dog	Dec., '87	Dec., '87	July 1	Medical Press, July 11.
155	Ducos, Mathieu (28)	St. Jean de Bonnefond (Loire) ...	Cat	June 16	June 20	July 18	L'Intransigeant, Paris, September 10.

(¹) Each died four days after the return from Paris.—(*Journal de Médecine de Paris*, January 2, 1887.) (²) M. Pasteur has stated that Lord Doneraile was not treated under the intensive method. (³) No clinical or experimental proof that the animal was affected with rabies has been produced.—*Journal de Médecine de Paris*, December 11, 1887. (⁴) See No. 265; the two Lindleys were brothers and inoculated together. (⁵) This and several following cases are admitted by M. Pasteur, and the details have been revised from the official "Annals" of his Institute.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
				1886:	1886:	1888:	1888:
156	Sinardet, Alphonse (26) ...	Polliot (Ain) ...	Dog	April 26	May 3	July 28	<i>Annales de l'Institut Pasteur</i> , September 25.
				1888:	1888:		
157	Mesnil, L. (44) ...	Châtenay ...	Cat	Mar. 25	Mar. 26	July 30	<i>L'Intransigeant</i> , Paris, September 10.
158	Sarasin, Mdme. (44) ...	St. Maurice, Switzerland ...	Dog	July 1	July 4	Aug 4	<i>L'Intransigeant</i> , Paris, September 10.
159	Guers, Joseph (27) ...	Chelles (Seine-et-Marne) ...	Dog	July 13	July 16	Aug. 8	<i>L'Intransigeant</i> , Paris, September 10.
160	N — (name unknown) ...	... ..	Dog	July 15	July 16	Aug. 20	Dr. Levraud (<i>Journal de Médecine de Paris</i> , Nov. 18).
161	Bacchi, Emilia (22) ...	Lercara, Sicily ...	Dog	July 19	July 20	Sept. 12	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
162	Couzinier, Jean (65) ...	Courbevoie (Seine) ...	Dog	Sept. 12	Sept. 12	Oct. 14	<i>Annales de l'Institut Pasteur</i> , October 25.
163	Bourelly, Leon (14) ...	Marseilles ...	Dog	May 27	June 7	Nov. 2	<i>Annales de l'Institut Pasteur</i> , November 25.
164	Ricciola, Antonia (3½) ...	Palermo ...	Dog	Nov. 29	Dec. 3	Dec. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
165	Child (name unknown) ...	Rio de Janeiro ...	Dog	...	...	23rd day	<i>Medical Press</i> , December 26.
166	One person ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
167-8	Two persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
						1889:	1889:
169	(¹) Mayland, Rose (3) ...	Belbeuf (Seine-Inférieure) ...	Dog	Dec. 13	Dec. 15	Jan. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
170	X — (19) ...	Peyrestortes (Pyrenées-Orientales) ...	Dog	Dec. 8	Dec. 9	Jan. 9	<i>Journal de Médecine de Paris</i> , February 17.
171	(¹) Allègre, Louis (14) ...	Cambes (Gironde) ...	Dog	Dec. 25	Dec. 28	Jan. 14	<i>Annales de l'Institut Pasteur</i> , January 25.
172	Palmeri, Melchiorre (18) ...	Calatafimi, Sicily ...	Dog	Nov. 30	Dec. 1	Jan. 20	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
173	Druant, Blanche (16) ...	Lariboisière, Paris	Dog	Dec. 25	Dec. 26	Feb. 8	<i>Journal de Médecine de Paris</i> , February 24.
				1889:	1889:		
174	Druaux, B. (15) ...	Aubervilliers ...	Dog	Jan. 7	Jan. 9	Feb. 11	<i>Lancet</i> , March 16.
				1888:	1888:		
176	J. L. Dufour (72) ...	Veyras ...	Dog	Dec. 23	Dec. 25	Feb. 13	<i>Lancet</i> , March 16.
				1889:	1889:		
176	Arenés, Gilles (50) ...	Soler (Pyrenées-Orientales) ...	Dog	Jan. 26	Jan. 29	Feb. 24	<i>Annales de l'Institut Pasteur</i> , March 25.
				1888:	1888:		
177	Rey, Ernest ...	Oissel ...	Dog	Dec. 13	Dec. 17	Mar. 4	<i>Lancet</i> , March 23.
				1889:	1889:		
178	An Italian Child ...	Cairo ...	Dog	Feb. 4	Feb. 9	Mar. 5	<i>British Medical Journal</i> , May 11. [Treated at Naples]
179	Mahout, Ed. (8) ...	Levallois - Perret (Seine) ...	Dog	Jan 31	Feb. 3	Mar. 9	<i>Annales de l'Institut Pasteur</i> , March 25.
180	(¹) Rascol, Pierre (52) ...	Murat (Tarn) ..	Dog	Feb. 28	Mar. 9	Apr. 14	<i>Journal de Médecine de Paris</i> , October 13.
				1887:	1887:		
181	Moens, Henri (24) ...	Anvers (Belgium)	Dog	Mar. 2	Mar. 7	May 17	<i>Annales de l'Institut Pasteur</i> , June 25.
		[du-Nord)		1889:	1889:		
182	Maillot, Mdme. (86) ...	Coatascorn (Cotes-Newry, Ireland) ...	Dog	April 27	May 3	June 2	<i>Annales de l'Institut Pasteur</i> , June 25.
183	Waleley, Patrick (7) ...	Newry, Ireland ...	Dog	May 3	May 20	June 13	<i>Annales de l'Institut Pasteur</i> , July 25.
184	(¹) Condurier, Gustave (7) ...	Noyarey, Grenoble	Dog	June 9	June 15	June 24	<i>Ibid.</i>
185	A Child (name unknown) ...	Milan ...	Dog	May	May	June	} <i>Journal de Médecine de Paris</i> , June 30. [This and the four preceding cases were treated at the Institute of Dr. Bareggi, of Milan.]
186	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
187	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
188	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
189	A Child (name unknown) ...	Milan ...	Dog	May	May	June	
190	Valli, Romeo (11) ...	Milan ...	Dog	May 30	May 31	June 27	} <i>Il Secolo</i> , of Milan, June 27.
191	Bulli, G. (child) ...	Milan ...	Dog	May 30	May 31	June 28	
192	Lurashi, Rosa (14) ...	... ..	Dog	June 10	June 11	June 28	
193	Trottet, G. (13) ...	Paris ...	Dog	May 23	May 25	July 14	<i>Journal de Médecine de Paris</i> , July 28.
194	Gilbert, Prosper (11) ...	Brussels ...	Dog	June 18	June 24	Aug. 1	<i>Annales de l'Institut Pasteur</i> , August 25.
195	Claudel, M. ...	Nancy, France ...	Dog	July 8	July 19	Aug. 6	<i>Journal de Médecine de Paris</i> , October 6.
196	Sottiaux, J. B. (54) ...	Bougival (Seine-et-Oise) ...	Dog	July 5	July 5	Aug. 13	<i>Annales de l'Institut Pasteur</i> , August 25.
197	Manuel, José (6) ...	Asteazu (Spain) ...	Dog	June 30	July 9	Aug. 29	<i>Annales de l'Institut Pasteur</i> , October 25.
198	Auroux, Gilbert ...	Néris-les-Bains ...	Dog	July 7	July 9	Aug. 19	M. Boissier, <i>Journal de Médecine de Paris</i> , Aug. 25.
199	Yorke, Claude James (7) ...	Ch. Fenton, Yorks.	Dog	Aug. 5	Aug. 9	Aug. 31	<i>Yorkshire Post</i> , September 5.
200	Bia, Albert (boy) ...	Sala Braganza ...	Dog	Nov. 4	Nov. 5	Nov. 24	<i>Secolo</i> , Milan, November 25.
201-2	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
203	One person ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
						1890:	1890:
204	Monastirska, A. (6) ...	Charkow, Russia ...	Dog	Jan. 27	Jan. 29	Feb. 28	} Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
205	Malikyna, Acouline (17) ...	Charkow, Russia ...	Dog	June 23	July 1	July 24	
206	Garbounoff, Matrena (50) ...	Charkow, Russia ...	Dog	Aug. 12	Sept. 5	Oct. 9	
207	Mesenzoff, Pierre (42) ...	Charkow, Russia ...	Wolf	Apr. 1	Apr. 3	Oct. 10	
208	Aleksandroff, F. (40) ...	Charkow, Russia ...	Wolf	Sep. 14	Oct. 4	Oct. 23	
209	Alferenkoff, F. (28) ...	Charkow, Russia ...	Wolf	Sep. 14	Oct. 4	Oct. 25	

(¹) Died while still under treatment. (²) Another man bitten by the same dog lived, and Prof. Peter, of Paris, stated that Rasool died of rage du laboratoire or Pasteur's rabies.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
210	Bratelski, Tikon ...	Charkow, Russia...	Wolf	1889 : Oct. 13	1889 : Oct. 18	1889 : Nov. 6	1890 : Reported in <i>Annales de l'Institut Pasteur</i> , Sept. 25, by Dr. Wysokowicz, of the Pasteur Institute, Charkow.
211	Plotnikoff, L. (55) ...	Charkow, Russia...	Wolf	Sep. 14	Oct. 4	Nov. 10	
212	Sawelieff, W. (27) ...	Charkow, Russia...	Dog	June 11	June 18	Dec. 25	
213	T—, Alice (8) ...	Paris	Dog	Nov. 16	Nov. 19	1890 : Feb. 9	<i>Journal de Médecine de Paris</i> , February 16.—Report of Dr. Potin.
214	Paris, Louis (10) ...	[Loire] Prenilly (Indre-et-	Dog	1890 : Jan. 14	1890 : Jan. 17	Feb. 18	Dr. Durand in <i>Annales de l'Institut Pasteur</i> , April 25. <i>Times</i> , London, March 13. [Pasteur, April 25.
215	Rankin, Joseph (13) ...	Coleraine, Ireland	Dog	Jan. 29	Feb. 2	Mar. 10	
216	Olivier, Florian (43) ...	Templeuve (Nord)	Dog	Jan. 27	Feb. 8	Mar. 15	
217	Gerday, Louis (104) ...	St. Georges (Belgium)	Dog	Mar.	Mar. 23	Mar. 31	Dr. Tison reported the case to <i>Annales de l'Institut Pasteur</i> , April 25. [Died while under treatment.]
218	Grant, Justin (52) ...	Birac (Lot-et-Garonne) ...	Dog	Mar. 23	Mar. 31	May 4	<i>Annales de l'Institut Pasteur</i> , May 25.
219	Dubois, Josephine (70) ...	Locquignol (Nord)	Dog	June 15	June 17	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
220	Dégéan, Albert (31) ...	Ste. Livrade (Lot-et-Garonne) ...	Dog	June 3	June 7	Aug. 6	Dr. Gaumeton reported the case to <i>Annales de l'Institut Pasteur</i> , August 25.
221	Casali, Bianca (7) ...	Copparo, near Ferrara, Italy ...	Dog	Aug.	Aug.	Aug. 29	<i>Roma</i> (Italian Journal), September 3. [Treated at Bologna.]
222	Bandino, Thérèse (13) ...	Bocca, nr. Cannes	Cat	July 30	Aug. 4	Sept. 4	<i>Annales Pasteur</i> , November 25.
223	Martin, Jules (7) ...	Cannes ...	Dog	July 18	July 19	Sept. 16	<i>Journal de Médecine de Paris</i> , September 21.
224	Vidalon, Sebastien (46) ...	Ille-sur-Tet, nr. {	Dog	Sept. 6	Sept. 10	Oct. 2	<i>Galignani's Messenger</i> , October 8, 1890.
225	Domenech, Jean (boy) ...	Perpignan {	Dog	Sept. 6	Sept. 10	Oct. 3	<i>Galignani's Messenger</i> , October 8, 1890.
226	Fournés, Joseph (14) ...	Guyotville, Algeria	Dog	Aug. 1	Aug. 8	Oct. 14	<i>Annales Pasteur</i> , November 25.
227	(¹) Groussous, Jean (52) ...	Fedj-M'zala (Constantine) ...	Dog	Oct. 13	Oct. 22	Nov. 10	<i>Annales Pasteur</i> , November 25.
228-31	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
232	Birebent, Jules (24) ...	Pamiers, Ariège ...	Dog	Oct. 10	Oct. 14	Dec. 1	1891 : Dr. Allana, <i>Annales de l'Institut Pasteur</i> , January 25.
233	Drago, Vincenzo (50) ...	Tripi, Sicily ...	Dog	Nov. 18	Dec. 19	Jan. 5	Report of Drs. Blasi and Russo-Travali, Palermo, 1891. <i>L'Indépendant des Basses Pyrénées</i> , January 23.
234	Brousse, Raymond (24) ...	Toulonne (Gironde)	Dog	Aug. 16	Aug. 20	Jan. 15	
235	Terles, Barthélemy (59) ...	Sainte-Sixte (Lot-et-Garonne) ...	Dog	1891 : Jan. 1	1891 : Jan. 5	Feb. 8	<i>Annales de l'Institut Pasteur</i> , March 25.
236	Binet, Auguste (75) ...	Méaulte (Somme)	Dog	1890 : Dec. 5	1890 : Dec. 13	April 15	<i>Annales de l'Institut Pasteur</i> , May 25.
237	Fronin, Gaston (16) ...	[(Gironde) Cubzac-les-Ponts	Dog	1891 : Apr. 27	1891 : May 3	June 1	<i>Annales de l'Institut Pasteur</i> , June 25.
238	(¹) Fridy, Mohammed D. (25)	Sfax (Tunis) ...	Dog	May 2	May 22	June 12	<i>Annales de l'Institut Pasteur</i> , June 25
239	Gagliani, Agata (4) ...	Palermo ...	Dog	May 4	May 6	June 18	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
240	(²) Jnda, Isaac (28) ...	Salonica, Turkey	Dog	1889 : May 25	1889 : June 3	July 11	<i>Annales de l'Institut Pasteur</i> , September 25.
241	Milet, Henri (11) ...	Montrenil-sous-Bois (Seine) ...	Dog	1891 : June 18	1891 : June 23	July 20	<i>Annales de l'Institut Pasteur</i> , August 25.
242	Macca, Concetta (75) ...	Catania, Sicily ...	Dog	July 1	July 21	Aug. 2	Report of Drs. Blasi and Russo-Travali, Palermo, 1896. <i>Annales de l'Institut Pasteur</i> , September 25.
243	Pélofi, Baptiste (21) ...	Jaurac (Aude) ...	Dog	Feb. 7	Feb. 14	Aug. 8	
244	Varney, Henry (boy) ...	New York ...	Dog	...	...	Aug. 14	<i>Birmingham Daily Post</i> , August 15.
245	Inzerilla, Pietro (8) ...	Partinico, Sicily...	Dog	June 14	June 19	Aug. 15	Report of Drs. Blasi and Russo-Travali, Palermo.
246	(¹) Sommier, Joseph (6) ...	Joudes (Saône-et-Loire) [(Spain)	Dog	Aug. 12	Aug. 16	Sep. 2	<i>Annales de l'Institut Pasteur</i> , September 25.
247	Roig, Juan (13) ...	Puebla de Tiana	Dog	Sep. 7	Sep. 12	Oct. 12	<i>Annales de l'Institut Pasteur</i> , November 25.
248	Morton, Robert D. (young man) ...	Columbia, S. Carolina, U.S.A. ...	Dog	Aug. 6	Aug. 7	Oct. 25	Treated at New York.— <i>Boston Post</i> , October 26.
249	Carry, Louis (13) ...	Lyons ...	Dog	Sep. 11	Sep. 24	Oct. 29	Reported to Pasteur's <i>Annales</i> , (Nov. 25) by Dr. Roux of Lyons. <i>Annales de l'Institut Pasteur</i> , December 25.
250	Bommelle, Xavier (54) ...	Remy (Oise) ...	Dog	Oct. 17	Oct. 20	Nov. 12	
251	Bolinhas, José (4) ...	Crato (Portugal)...	Dog	Nov. 3	Nov. 13	Dec. 7	<i>Annales de l'Institut Pasteur</i> , December 25.
252-55	Four persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
256	Lacombe, Ernest (30) ...	Palestro (Algeria)	Dog	Mar. 17	Mar. 25	Dec. 25	1892 : <i>Annales de l'Institut Pasteur</i> , February 25.
257	Beale, George (boy) ...	Kilkenny (Ireland)	Dog	Nov.	Nov.	1892 : Jan. 4	<i>Weekly Irish Times</i> , Dublin, January 2. <i>Times</i> , February 5.
258	Hayden (9) ...	Carlow (Ireland)	Dog	May	May	Feb. 4	
259	Drouet, Georgette (6) ...	D'Issy (Seine) ...	Dog	1892 : Feb. 7	1892 : Feb. 25	Mar. 11	<i>Annales de l'Institut Pasteur</i> , March 25.
260	Santhoux, Eugène (labourer)	Gex (Ain) ...	Dog	Feb. 9	Feb. 14	April 2	<i>Annales de l'Institut Pasteur</i> , April 25.
261	Pimentade Castro, B. P. (15)	Vianna de Castello (Portugal)	Cat	Mar. 2	Mar. 8	April 9	<i>Annales de l'Institut Pasteur</i> , May 25.
262	Micoïn, Augustin (18) ...	Versailles ...	Cat	Mar. 15	Mar. 17	April 11	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.
263	Ferudja, Francois (12) ...	Guelma, Algeria...	Dog	Apr. 5	Apr. 12	April 26	<i>Annales de l'Institut Pasteur</i> , May 25, 1893.

(¹) Died while still under treatment. (²) A remarkable case. The patient a doctor, went to Paris for treatment, and died of hydrophobia two years and two months afterwards.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
264	Labelle, Pierre (72)	Labèze	Dog	1892: Apr. 9	1892: Apr. 15	1892: May 7	1892: <i>Annales de l'Institut Pasteur</i> , June 25.
265	Segura, Sebastian (47)	Oran	Dog	Apr. 14	Apr. 24	May 15	<i>Annales de l'Institut Pasteur</i> , June 25.
266	Sauzia, Rosario (8)	Palermo ...	Dog	April 22	May 6	May 30	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
267	Mathias, Thomas (48)	Norvao, Portugal	Dog	June 15	June 30	July 14	<i>Annales de l'Institut Pasteur</i> , August 25.
268	Ruffini, Pietro (32)	Rocca di Papa, Italy	Dog	1891: Oct. 23	1891: Oct.	Aug. 27	Died at Rome. Case reported in Italian journals
269	Desvignes, Gustave (39)	Avenue de Breteuil, Paris ...	Dog	1892: July 23	1892: July 26	Aug. 29	<i>L'Etoile Belge</i> , Brussels, September 3.
270	(¹) Lindley, Herbert (17)	Cumberworth, Huddersfield	Dog	1887: Aug. 1	1887: Aug. 6	Sept. 7	<i>Huddersfield Daily Chronicle</i> , September 8.
271	Van Faassen (9)	Bennebrook (Holland)	Dog	1890: June 4	1890: June 18	Oct. 15	<i>Annales de l'Institut Pasteur</i> , December 25.
272	Gernez, Achille (44)	Beaumontz-les-Cambrai (Pas-de-Calais)	Dog	1892: Oct. 25	1892: Oct. 28	Nov. 18	<i>Annales de l'Institut Pasteur</i> , December 25.
273-4	Two persons	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
275-7	Three persons	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
278	Schirch, Louis (32)	Djadjelli (Algeria)	Dog	Aug. 22	Aug. 28	Oct. 24	1893: <i>Annales de l'Institut Pasteur</i> , January 25.
279	Scherr, Emile (35)	Oran ...	Dog	Oct. 9	Oct. 16	Dec. 9	<i>Annales de l'Institut Pasteur</i> , January 25.
280	D'Almeida, José J. (10)	d'Aveiro (Portugal)	Dog	Nov. 28	Dec. 7	Dec. 30	<i>L'Eclair</i> and other Paris Journals.
281-6	Six Persons	Moscow ...	in	the	year	1892	Dr. Goldenbach, <i>Pasteur's Annales</i> , September 25.
287	(²) Guillon, Augustine (17)	Voiron (Isère) ...	Dog	Dec. 13	Dec. 16	Jan. 4	1893: <i>Annales de l'Institut Pasteur</i> , January 25.
288	Duvivier, Charles (32)	51, rue Menilmontant, Paris ...	Dog	Oct. 18	Oct. 20	Jan. 7	<i>The Morning</i> (Paris news), January 7, and <i>Pasteur's Annales</i> , February 25.
289	Nardo, Francesca Maria (6)	Gioiosa, Sicily ...	Dog	1893: May 15	1893: May 18	June 1	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
290	Chetal, Antoine (26)	Aix-les-Bains ...	Dog	May 3	May 4	June 1	<i>Annales de l'Institut Pasteur</i> , July 25.
291	Chastaing, Léon (28)	Paris ...	Dog	May 12	May 15	June 25	<i>Annales de l'Institut Pasteur</i> , July 25.
292	Morel, Auguste (18)	Rue Portalis, Paris	Dog	May 30	May 30	Aug. 5	<i>Annales de l'Institut Pasteur</i> , September 25.
293	Mermont, Melchior	Bonneville ...	Dog	July 14	July 18	Aug. 6	<i>Annales de l'Institut Pasteur</i> , August 25.
294	Badaluccho, Mario (7)	Marsala, Sicily ...	Dog	July 28	Aug. 3	Aug. 17	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
295	Fages, Alfred (40)	Alais (Gard) ...	Cat	July 12	July 14	Aug. 20	<i>Le Gaulois</i> , Paris, August 22, and <i>Pasteur's Annales</i> .
296	Montessuy, J. M. (57)	St. Pierre-de-Rumilly (H. Savoie)	Dog	July 14	July 18	Aug. 23	<i>Annales de l'Institut Pasteur</i> , October 25. [Oct. 25.]
297	Ollero, Nemesio (52)	Debicho, Cordova, Spain ...	Dog	Dec. 15	Dec. 26	1894: Jan. 5	1894: <i>Annales de l'Institut Pasteur</i> , May 25.
298	F. Carbonnell (53)	Pozzo-Blanco, Cordova ...	Dog	Dec. 18	1894: Jan. 5	Jan. 26	<i>Annales de l'Institut Pasteur</i> , May 25.
299	Robert, Joseph (8)	Bougie (Constantine)	Dog	Oct. 4	Oct. 10	Feb. 16	1893: <i>Annales de l'Institut Pasteur</i> , April 25.
300	A douanier...	Souk-Ahras (Algeria)	Dog	Dec.	Dec.	Mar.	<i>Journal de Médecine de Paris</i> , March 18.
301	Fournès, Auguste ...	Chérakas (Algeria)	Dog	Aug. 1	Aug.	Mar. 12	<i>Journal de Médecine de Paris</i> , March 18.
302	Pialut, Huberte (56)	Neuilly ...	Dog	Dec. 31	1894: Jan. 3	April 10	1894: <i>Annales de l'Institut Pasteur</i> , July 25.
303	Varesi, Giovanni (5)	Pianello Valtidone, Italy ...	Dog	Mar. 22	Mar. 23	May 15	1894: <i>Il Secolo</i> (Milan), August 13, 1896. [Treated at Milan by Pasteur's intensive method.]
304	Oakes, Enoch (child)	Shawforth, Roch-	Dog	May 31	June 5	June 29	<i>Manchester Courier</i> , July 23.
305	Desquin-court, Mdme. (48)	Liévin (Pas-de-Calais)	Dog	Feb. 16	Feb. 18	July 12	<i>La Croix</i> , Paris, July 20.
306	Bentivegna, Vincenzo (30)	Corleone, Sicily ...	Dog	Mar. 4	Mar. 6	not given	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
307	(³) Stevenson, Malcolm (25)	Birkenhead	Dog	June 10	July 1	Aug. 8	<i>Birkenhead News</i> , August 11.
308	Delepine, boy (15)	St. Denis-des-Monts (Amfreville) ...	Dog	June 16	June 17	Aug. 12	<i>L'Industriel Elbeuvien</i> , August 15.
309	Saussol, Louise (33)	Cessenon (Hérault)	Dog	July 5	July 10	Aug. 15	1895: <i>Annales de l'Institut Pasteur</i> , May 25.
310	Vayre, Louis (5)	Bize (Aude) ...	Dog	June 29	July 8	Sept. 1	1894: <i>Annales de l'Institut Pasteur</i> , November 25.
311	Culotta, Michele (74)	Bagheria, Sicily ...	Dog	June 18	June 19	Sept. 13	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
312	Medina Josefa (53)	Malaga, Spain ...	Dog	Aug. 25	Sept. 3	Sept. 27	1897: <i>Report of the Antirabic Vaccinations in the Municipal Microbiological Laboratory of Barcelona</i> , by Dr. L. Claramont.

(¹) See No. 123; the two Lindleys were brothers, and were inoculated together. (²) Died while still under treatment. (³) Lieut. Stevenson, of the 93rd Highlanders, was bitten at Dalhousie, Punjab, India, where his regiment was stationed, and died of paralytic rabies at Birkenhead.

NO.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION.	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
313	Meynadier, Achille (39) ...	Sidi-bel-Abbès (Algeria) ...	Dog	1894 : Aug. 11	1894 : Aug. 19	1894 : Oct. 12	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
314	Richand, Joseph (4) ...	Beaussemlant (Drôme) ...	Dog	Oct. 4	Oct. 7	Nov. 6	1894 : <i>Annales de l'Institut Pasteur</i> , November 25.
315	Bentley, James (18) ...	Clayton-le-Moors, Lancashire ...	Dog	Oct. 18	Oct. 23	Nov. 10	<i>Annales de l'Institut Pasteur</i> , November 25.
316	Morreale, Angelo (8) ...	Bagheria, Sicily ...	Dog	July 29	Aug. 2	Nov. 15	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
317-18	Two persons ...	Treated at Turin	—	—	—	—	<i>Relazione del Servizio Batteriologico</i> , Turin, 1896.
319-22	Four persons ...	Treated at Naples	—	—	—	—	<i>Risultata della cura antirabica Pasteur</i> , Napoli, by Dr. A. Calabrese, Naples, 1896.
323	Prévost, Joseph (58) ...	Issy (Seine) ...	Dog	July 30	Aug. 4	Nov. 22	1895 : <i>Journal de Médecine de Paris</i> , March 10th, and <i>Annales de l'Institut Pasteur</i> , May 25.
324	Barry, Séverin (62) ...	Vattetot-sur-Mer (Seine-Inférieure) ...	Dog	Dec. 7	Dec. 12	Jan. 15	1895 : <i>Annales de l'Institut Pasteur</i> , May 25.
325	Rio, Julien Marie (7) ...	Missillac (Loire-Inférieure) ...	Dog	Dec. 20	Dec. 23	Jan. 22	<i>Annales de l'Institut Pasteur</i> , May 25.
326	Garrigues, Elisabeth (29) ...	Castelsarrasin (Tarn-et-Garonne) ...	Cat	1895 : Jan. 15	1895 : Jan. 18	Feb. 4	<i>Annales de l'Institut Pasteur</i> , May 25.
327	Stewart, Robertson (38) ...	Glasgow ...	Dog	Mar. 8	Mar. 11	Apl. 1	<i>North British Daily Mail</i> , April 2nd.
328	Longino, Salerno (14) ...	Borgetto, Sicily ...	Dog	Mar. 7	Mar. 9	April 6	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
329	Corepetti, Luigi (7) ...	Bobbio, Italy ...	Dog	April 8	April 10	May 3	<i>Il Secolo</i> (Milan), August 13. [Treated in Milan according to Pasteur's intensive method.] 1896.
330	(*) Blutel, Isidore (27) ...	St. Georges-d'Ambery (Orne) ...	Dog	Apl. 22	Apl. 23	May 14	<i>Annales de l'Institut Pasteur</i> , November 25. [November 25.
331	Kelly, James (6) ...	Belfast ...	Dog	Apl. 18	Apl. 23	June 25	<i>Irish News</i> , Belfast, June 27, and <i>Pasteur's Annales</i> ,
332	(*) Walton, B. A. ...	Houston County, Ga., U.S.A. ...	Dog	May 19	May	June 30	<i>The Dog Question</i> , Dobbs Ferry, N.Y., August.
333	Danio, Diego (15) ...	Grotte, Sicily ...	Dog	May 25	May 31	July 4	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
334	Howard, Benjamin (14) ...	Hyde, Cheshire ...	Dog	1894 : Nov. 14	1894 : Nov. 18	Aug. 29	<i>Hyde Reporter</i> , August 31.
335	(*) Huard, Joseph (39) ...	Saint Ellier (Mayenne) ...	Dog	Dec.	Dec.	Sep. 14	<i>L'Eclair</i> (Paris), September 15.
336	Nothard, Samuel (28) ...	Todmorden, Lancs. ...	Dog	1895 : Sep. 8	1895 : Sep. 15	Oct. 17	<i>Manchester Guardian</i> , October 22.
337	(*) Wilkins, Ethel (3) ...	Twickenham Park ...	Dog	Oct. 13	Oct. 15	Nov. 11	<i>The Globe</i> , London, November 12.
338	Lo Presti Vito (55) ...	Vizzini, Sicily ...	Dog	Oct. 8	Oct. 16	Nov. 25	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
339	(*) Wallender, Miss ...	Temesvar, Hungary ...	Dog	Dec. 25	Dec. 26	Jan. 11	1896 : <i>Echo</i> (London), and other journals, Jan. 11 and 13.
340	Plescia, Francesco (10) ...	Contessa Entellina, Sicily ...	Dog	Mar. 2	May 11	Feb. 10	Report of Drs. Blasi and Russo-Travali, Palermo, 1896.
341	Prats, Ventura (60) ...	Arenys de Mar, Spain ...	Dog	1896 : Feb. 1	1896 : Feb. 5	Mar. 6	<i>Report of the Antirabic Vaccinations in the Municipal Microbiological Laboratory of Barcelona</i> , by Dr. L. Claramont, 1897.
342	T—, Abraham (soldier)	Tiflis ...	Dog	Feb. 18	Feb.	Mar. 17	<i>Annales de l'Institut Pasteur</i> , October 25, 1897, Vol. XI., p. 791.
343	Lasallo, Louise (28 months)	Pomarez (Landes) ...	Cat	1895 : Oct. 16	1895 : Oct. 19	Apl. 4	<i>Annales de l'Institut Pasteur</i> , December 25.
344	(*) Labat, Pierre (37) ...	Bordeaux ...	Dog	1896 : Feb. 21	1896 : Feb. 25	May 24	<i>Annales de l'Institut Pasteur</i> , June 25.
345	Lambert, Thos. D. (18½) ...	Stockport ...	Dog	1895 : Mar. 3	1895 : Mar. 8	June 20	<i>Manchester Courier</i> , <i>Daily News</i> (London), and other journals, June 22; <i>Brit. Med. Journal</i> , July 4.
346	Boy ...	Orthez (Basses Pyrénées) ...	Dog	1896 : June	1896 : June	June 22	Died at l'Hôpital de la Pitié, Paris.— <i>L'Indépendant</i> (Pan), June 24.
347	Barimbordes, Victor (12) ...	Navarreux, Pau ...	Dog	April 5	April 26	June 20	Telegram from Pau in <i>Il Secolo</i> (Milan), June 26; also <i>Annales de l'Institut Pasteur</i> , December 25.
348	Chapelier-Marty (18) ...	Sauvagnon, Pau ...	Dog	June 1	June 2	June 29	<i>Daily News</i> (London), and <i>L'Indépendant</i> (Pan), June 30.
349	N—, Eudoxia (3) ...	Tiflis ...	Dog	May 28	May	July 8	<i>Annales de l'Institut Pasteur</i> , October 25, 1897, Vol. XI., p. 791.
350	Openshaw, Thomas (man)	Radcliffe, Manchester ...	Dog	1895 : Nov. 20	1895 : Nov. 22	July 14	<i>Manchester Guardian</i> , July 17.
351	A—, Zinaidia (5) ...	Tiflis ..	Dog	1896 : July 21	1896 : July 22	Aug. 10	<i>Annales de l'Institut Pasteur</i> , October 25, 1897, Vol. XI., p. 791.

(1) This patient was killed through jumping, while mad, from a third storey window; he was twice treated at the Pasteur Institute, in December, 1894, and April, 1895. (*) Became ill before the inoculations were finished, and died two days after their completion. (2) Treated at the Pasteur Institute, Budapest. (3) Treated at the Pasteur Institute, New York. (4) This small child received no fewer than 48 inoculations—24 during the last 36 hours of her life, and after her case had been pronounced to be hopeless by the doctors at the Pasteur Institute, Paris. (5) The biting dog fled and was not traced; the wounds (on the left hand and head) were at once cauterised with a red-hot iron.

No.	PATIENTS.	LOCALITY.	BITTEN		FIRST INOCULATION	DIED OF HYDROPHOBIA.	SOURCE OF INFORMATION AND DATA.
			BY	ON			
352	Cros, Léon (26 months) ...	Beziers ...	Dog	1896: July 19	1896: July 25	1896: Aug. 28	1896: <i>Annales de l'Institut Pasteur</i> , December 25. [Treated at Turin.] <i>Il Secolo</i> , Milan, September 7, 1896.
353	Perico, Luigi (13) ...	Seriate, Bergamo, Italy ...	Dog	Aug. 18	Aug. 19	Sept. 6	
354	(¹) Van Teyn, Lient. L. ...	Dutch East Indies	Dog	Sept. 22	Sept.	Nov. 14	1896: <i>La Patrie</i> , Paris, November 26.
355	Cavarroc, Marie (26) ...	Fau, St. Parthem, France ...	Dog	July	July	Nov. 25	
356	(²) Tibodo, Victor (man) ...	Tourcoing, nr. Lille	Dog	Oct.	Oct.	Dec. 5	<i>British Medical Journal</i> , December 12 (Paris correspondence).
357	Avegger, Joseph (20) ...	Willisau-Campagne, Switzerland ...	Dog	1895: Oct. 20	1895: Oct. 28	Dec. 19	<i>Annales de l'Institut Pasteur</i> , December 25.
358	Henry, Robert (8) ...	Baltimore, U.S.A.	Dog	1896: Dec. 1	1896: Dec. 4	Dec. 21	1897: Two of these cases were reported by <i>British Medical Journal</i> (quoting <i>Daily Mail</i>), January 2, the four reported and vouched by Dr. Dulles, Philadelphia. All were treated by Dr. Gibier, New York.
359	Eppers, Conrad (15) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
360	Perry, Robert (16) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	Dec. 26	
361	Wilson, Laurence E. (11) ...	Baltimore, U.S.A.	Dog	Dec. 1	Dec. 4	1897: Jan. 5	
362	Davoust, Médéric (60) ...	Livry-sur-Orthon, France ...	Dog	1897: Jan. 15	1897: Jan. 19	Mar. 17	<i>Le Petit Parisien</i> , March 20.
363	Thompson, James (4) ...	Reddish, Manchester...	Dog	1896: Dec. 11	1896: Dec. 14	Mar. 27	<i>Manchester Guardian</i> , March 30.
364	Sapin, Marie ...	Bordeaux ...	Dog	1897: —	1897: —	Apr. 18	Reported by Dr. A. Lutaud in <i>Journal de Médecine de Paris</i> , June 27. <i>L'Eclair</i> , Paris, May 17.
365	(³) Mauléon, Gaston (child) ...	Hellemme, Lille ...	Dog	—	—	Apr. 19	
366	(⁴) Fortin, Paul (21) ...	Nanterre ...	Dog	Jan. 28	Jan. 30	April	
367	Silk, Charles (6) ...	Long Island City, U.S.A. ...	Dog	Apr. 27	Apr. 28	May 16	
368	(⁵) Baronchelli, Maria (child) ...	Ponte di Noss, Val de Seriana, Italy ...	Dog	May	May 3	May 28	<i>Il Secolo</i> , Milan, June 30.
369	(⁶) Albin, G. B. (71) ...	Sorpello, Italy ...	Dog	Feb.	Feb.	June 1	<i>Il Secolo</i> , Milan, June 2.
370	(⁷) Tribiani, Francesco (7) ...	Piacenza, Italy ...	Dog	May	May	June 14	<i>Il Secolo</i> , Milan, June 15.
371	(⁸) Cattorini, Angelo (48) ...	Samarate, Italy ...	Dog	May 18	May 19	Aug. 25	<i>Il Secolo</i> , Milan, August 25.
372	(⁹) Happer, Mr. ...	Newchwang, China	Dog	1896: Dec. 8	1896: Dec.	Aug.	<i>North China Herald</i> , quoted in <i>Times of India</i> , Bombay, August 25.
373	(¹⁰) Laporte, T. (49) ...	Roubaix, France...	Dog	1897: July 3	1897: July 4	1898: Jan. 3	1898: Dalziel Telegram in English papers, dated January 6.

(¹) Treated and died at Batavia; case reported by Mr. A. J. J. Eeling, of Amsterdam. (²) The treatment is stated to have been left unfinished owing to an attack of fever. (³) Inoculated at Lille, by Dr. Calmette. (⁴) Died at the Beaujon Hospital. (⁵) Treated at the Hospital Maggiore, Milan. (⁶) Treated at Marseilles. (⁷) Treated at the Antirabic Institute, Milan. (⁸) Died in the Ospedale Maggiore, Milan. (⁹) Treated at the Pasteur Institute, Saigon. (¹⁰) Treated at the Pasteur Institute, Lille.

RECAPITULATION.

INOCULATED IN PARIS:—

1. Under first formula ...	41
2. „ intensive treatment ...	28
3. „ third formula ...	167
	236

INOCULATED IN RUSSIA:—

1. At Odessa ...	26
2. At Charkow ...	9
3. At Moscow ...	6
4. Elsewhere in Russia ...	8
	49

INOCULATED AT OTHER CENTRES:—

1. In Italy ...	70
2. At Rio de Janeiro ...	1
3. At New York ...	7
4. At Budapest ...	1
5. At Batavia ...	1
6. At Marseilles ...	1
7. At Saigon ...	1
8. At Tiflis ...	3
9. At Barcelona ...	2
10. At Lille ...	1
	88

Total deaths after preventive treatment ... 373

THE ZOOPHILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 11.]

LONDON, MARCH 1, 1898.

[POST FREE, 3½d.]

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

All communications for the Editor should be addressed to him at the Society's office, and not otherwise.

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NOTES AND NOTICES.

THE annual meeting of the Council and the celebration of the Society's anniversary have been fixed to be held at St. Martin's Town Hall, on Wednesday, the 18th of May, the former in the afternoon, and the latter in the evening.

It is announced that the Committee of the London Anti-vivisection Society has resolved to introduce two bills dealing with the question of experiments upon living animals. First, a measure will be presented to the House of Lords enacting that vivisection shall be totally abolished and prohibited by law. The second measure is for submission to the House of Commons, and is intended to "more effectually restrict experimentation, and to eliminate the abuses which have grown out of the Act of 1876, until such time as the practice is abolished."

CONNECTED with the subject above-named is that of the policy of the National Anti-vivisection Society. As will be seen by the full and complete report we present in a special supplement of the proceedings at the special meeting of the Council of the Society on the 9th ulto., the National Society has now somewhat modified its programme. Some of the most ardent opponents of vivisection, seeing the meagre result in legal change, or possibility of change, after twenty years of strenuous agitation, have promoted a movement for a modification of the old programme, in so far that while the demand

for the total prohibition of vivisection will not be abandoned, provision will be made for the acceptance of "lesser measures," if those measures can be got and applied in the diminution of the sufferings inflicted on animals in the scientific laboratories.

THE meeting of the Council was attended by about sixty members and delegates, and although opinion was sharply divided, yet the advocates of "lesser measures" proved to be in the majority. In considering and criticising this decision, the primary object of the Society should be kept clearly in mind. That object has long been defined as "the protection of animals from vivisection." Total prohibitionists, no doubt, read into, or take for granted in it, the word "all" before "vivisection." To abolish all vivisection at one operation would be a gigantic, and to many it appears to be an impossible task. Hence the impatience of those who desire to do something "for the protection of animals from vivisection," and hence the present decision. That decision has been taken after much discussion and deliberation, and we will now hope that it will carry us some way towards the goal at which we aim, that goal being total prohibition.

THE American Anti-Vivisection Society, whose headquarters are at Philadelphia, held its fifteenth annual meeting there on the 28th of January. Mrs. Richard P. White, recording secretary, in her report, took an encouraging view of the situation. Several spirited addresses were given on the occasion, and the numerous staff of office-bearers re-appointed to carry on the good work in the current year.

THE *Hospital* (February 12th), in an article on "The Vivisection Question," pays a high compliment to the way the anti-vivisectionists conduct their crusade.

"We have the greatest admiration for the ingenuity with which the officials . . . of the societies which interest themselves in this matter do their work. The catchy little pamphlets, the newspaper paragraphs, the endless letters with which the press is inundated, all betoken unbounded energy and push."

THE Editor, however, remarks that "as a means of drawing attention to the subject, a single case in the police courts, a single proof that the law is being infringed," would be far more valuable than anything else, and twits us with the fact that "that case is not forthcoming." But the law is not infringed so far as we can prove, the law so protects the vivisector on every side, allows so many loop-holes for his escape, that under its present provisions it is practically impossible to convict him.

WE have received from an esteemed lady correspondent at Bombay several batches of newspaper cuttings relating to the prevalent plague and the attempts to meet its ravages. Of course the subject to every one in Bombay is intensely interesting, and especially to the native population who suffer most from the scourge. So far as we can gather the attempts to combat the ravages of the plague by inoculation appear to have proved futile, although Dr. Haffkine and others have done their utmost to show the contrary. The best proof of the inefficacy of the inoculations is that the plague pursues its course in spite of them.

WE are often asked if there is any germ of truth at all in the serum treatment of disease. There is; and it is as well that our readers should know exactly what it is. In infectious diseases a proportion of the delicate blood corpuscles die and become waste matter in the blood. If the patient be of good constitution the system soon eliminates this dead matter. Now all serums being very liable to decomposition are preserved by a small proportion of carbolic acid, and this being injected hypodermically acts antiseptically in the blood, and so assists nature in getting rid of the decomposing corpuscles. Needless to say, we do not owe this element of success in any way to experiments upon animals.

PRACTICAL physicians are regretting that at the great Medical Congress of Moscow last summer the practical side of medicine was lost sight of. As Amédée Latour said fifty years ago, "The practice of medicine is nothing more than a useless natural history." He referred to the followers of Bichat, whose main ambition was to perform a good *post mortem* examination on their patients to demonstrate that their theory of the disease was correct.

THE *British Medical Journal* becomes amusing when it writes on the subject of the Pasteur treatment. In its issue of the 5th February, it referred to a visit to the Parisian Pasteur Institute of a certain Professor Allen, of Birmingham, and thanked him for "his delightful account of the work of the Pasteur Institute." The account of Professor Allen's case, as given by the *Journal*, is equally "delightful"—to the sceptical unbeliever in Pasteurism. "He was bitten," we read, "on the hand through a glove by a stray dog that had the ordinary signs of rabies. He cauterized the bite, started at once for Paris, and was under treatment within forty-eight hours of the accident." Now, without Pasteurism there were two certain safeguards against infection, first the glove, which would keep out the poison, and then the cauterization, which would have destroyed it if it had got in. Perhaps this is the aspect of the case which the *Journal* considers so delightful. What is still more delightful to us is the simplicity which can in the circumstances possibly attribute any credit to the Pasteurian treatment in such a case.

M. OLIVIER DE RANTON, "after experimenting upon horses," states that "the oat owes its nutritive properties to the husk, which contains one two-thousandth of its weight of the glucoside of vanilla." Medical papers do not hesitate to print nonsense of this sort just because it bears the mark of laboratory research. Oats nourish horses because they are food, not because they are vanilla-flavoured. The passion for self-advertisement

leads experimenters into absurdities, which will ultimately prevent the public paying any regard whatever to their silly utterances.

THE most deadly microbe, according to recent researches, says Dr. Saint-Just, of Paris, is found in the normal human saliva. It is said to destroy the celebrated microbe of diphtheria, although the Academy of Medicine of Paris admitted a few months ago that it is not well identified even yet.

M. CHIROLIX, says the *Medical Brief*, claims that a tincture of wasps will cure the bite of the viper. "The Academy of Medicine encourages the researches of M. Chirolix." We seem to be working back to the nasty pharmacy of the middle ages.

THE *Veterinarian* for January, in an article on "Wound Treatment," says:—

"To test the action of putrid and septic matters in healing some dogs were procured and wounds of six to eight inches in length, extending to the cutaneous cellular tissue, were made under the most insanitary conditions, i.e. in the dissecting rooms, with unwashed hands, etc. The wounds were inoculated with putrid blood."

THE dressings were so arranged that the discharges could escape, and the injuries soon healed. Other similar wounds were covered with common cotton wool and suppuration took place and the animals would have died had they not torn off the dressings and licked their wounds.

La Voce della Verità, the great Catholic organ in Rome, in its issue of January 31st, has for its first leading article a violent attack upon the Marchese di Rudini for having issued a circular to the Prefects and Syndics of Italy, calling their attention to the ill-treatment of animals. The *Voce*, after mentioning the fact, proceeds indignantly to ask:—

"But what is this sentimentality which is being introduced, out of all reason, in favour of beings created by God in an inferior state, and conceded to man with no power to claim any right? The more the corruption of manners advances, the more tenderesses for the brutes are multiplied, even to the formation of Societies for their protection!"

IN a review of Sir J. Russell Reynold's "Essays and Addresses," the *Practitioner* says, "The author would have us learn that medicine, while she makes such strides by means of science, will never herself become a science, and that he is the best physician who, while using science skilfully, never forgets that medicine is in its essence an art." Sir Russell Reynolds, F.R.S., President of the College of Physicians, could say this with impunity, but if we tell our opponents that medicine is not a science, what a storm we raise!

REFERRING to our note a month ago on the attitude assumed towards the anti-vivisection movement by Lord Charles Beresford in course of his candidature for York, a correspondent suggests that we should refute in detail the three assumptions on which, according to the *Morning Post*, Lord Charles took his stand. The three points assumed were:—(1) Vivisection, he believed, was regulated by Government; (2) was conducted under most humane conditions; and (3) had been instrumental, in the hands of skilful surgeons,

in saving the lives of hundreds of men and women." On this we remarked that Lord Charles "had been well instructed by the pro-vivisectionists apparently." We made this observation because the statements above quoted are the old stock allegations in favour of vivisection, which we have heard and refuted a hundred times.

HOWEVER, as our correspondent invites us to reply on the three points put, we will do so as briefly as may be. In the first place, Vivisection is not "regulated by Government." It ought to be regulated by the Act of Parliament, enforced by the Home Secretary. The Act (clause 10) enjoins that the Home Secretary *shall* cause all registered places where Vivisection is carried on, to be from time to time visited by inspectors, "for the purpose of securing a compliance with the provisions of this Act." As is pretty well known, for many years there was only one inspector for the whole of Great Britain, although there were many laboratories spread over the country from north to south, and experimentation was going on simultaneously in each. It was, therefore, out of the question that "compliance with the provisions of the Act" could be secured. In recent years a second inspector has been appointed, but having regard to the great area under the jurisdiction of these two men, it is physically impossible for them to exercise effective control. That they do not do this is proved by the fact that the returns of experiments to Parliament are still made up from figures supplied by the Vivisectionists themselves, and the Home Office has no means of effectively checking them.

THEN the "humane conditions" in which Lord Charles Beresford believes are discounted by the fact that the vivisectionists themselves frequently record, in the *Journal of Physiology* and elsewhere, doings of their own which are the reverse of humane. For instance, in 1897 an experiment was reported in the *Journal* (vol. XX., p. 340) on a rabbit whose nerves were stimulated—a painful process—for twelve hours. Chloral was administered "when necessary," but experiments on the nerves cannot be done under effective chloroformization. In another case, related in the *Lancet*, February 6th, 1897, the entire brain of a monkey was removed, and experiments on the nerves were subsequently performed. Then there were nerve stimulations on cats and monkeys, by Dr. Page May (*Lancet*, January 23rd, 1897), injections of poisonous serum on ponies, rabbits, and human beings, by Dr. Washbourn, at Guy's Hospital (*British Medical Journal*, February 27th, 1897), experiments on the circulation, involving severe dissections and researches which avowedly could not be done under chloroform. Many other cases might be cited, but surely these are sufficient to vitiate the plea of "most humane conditions" in regard to British Vivisections.

IT is easy to claim that vivisection "has been instrumental, in the hands of skilful surgeons, in saving the lives of hundreds of men and women." It is quite another thing to prove it. Indeed, it is incapable of proof. There are many men and women who die because the medical profession can do nothing for them. There are many more whose ailments cannot be cured, or even relieved, but are classed as incurable, although some of them are suffering from maladies alleged to have been rendered tractable by discoveries made

through vivisection. Yet they are in practice given up as hopeless. Nor is the benefit of mankind the real object of vivisection. What Dr. Ludimar Hermann, of Zürich, said twenty years ago, that "the advancement of our knowledge, and not utility to medicine, is the true and straightforward object of all vivisection," is true to-day. He was corroborated by the late Dr. George Hoggan, who, as the result of experience in the laboratory of the late Claude Bernard, said, "The idea of the good of humanity was simply out of the question, and would be laughed at."

IN this connection we will quote once more the testimony of three English medical men, the first two actual vivisectionists, and let their utterances speak for themselves:—

(1) "It is customary to say that medicine is 'applied physiology,' and it would be very desirable if we could honestly say that this was the case. But the stock of physiological knowledge which we are able to apply effectively in the practice of medicine is infinitesimal as compared with our ignorance both of the intimate nature of vital processes and the means of regulating or controlling them."—Prof. Ferrier, *British Medical Journal*, November 23rd, 1895, p. 1,277.

(2) "The value of physiological knowledge to the practitioner is not so great, since so much current physiological teaching ignores human physiology in its relation to medicine, and the science is taught from the standpoint of the pure physiologist. . . . The burden laid on the student of medicine is so great and increasing that it is essential that too much time should not be spent in studies taking him away from the hospital wards."—Prof. J. R. Bradford, *Times*, October 2nd, 1895.

(3) This refers to the successful use of drugs to combat disease. The speaker had been referring to the recent substitution of the word "pharmacology" for "therapeutics," and pointing out that both meant practically the same thing, and that in books with either title the account of a drug was formed for "the greater part," notwithstanding laboratory experiments on animals, "of a statement of the effect of drugs upon man in health and in various conditions of disease. This part," he added, "forms three-quarters, nine-tenths, or in some cases even more, of the whole. And how has it been obtained? By clinical observation such as you and I can make and are making every day."—Dr. S. West, the *Lancet*, May 30th, p. 1,474.

IN reviewing a book on "Sleep," by Marie de Manacéine, the *Manchester Guardian* (February 15th) cites a passage involving stupid and painful experiments with puppies, and makes some pertinent remarks. We append the full quotation:—

"Under the heading 'The Necessity for Sleep' occurs the following passage:—'I have found by experimenting on ten puppies that the complete deprivation of sleep for four or five days causes irreparable lesions in the organisms, and, in spite of every care, the subjects of these experiments could not be saved. . . . As a rule, the puppy deprived of sleep for three or four days presents a more pitiful appearance than one which has passed ten or fifteen days without food.' A proceeding of this kind described as her own exploit by a woman is peculiarly repulsive. Such 'experiments' are as entirely useless and superfluous as they are revolting, there being no room whatever for doubt as to what would be the result of depriving young mammals of sleep for prolonged periods. The whole proceeding is the worst kind of pseudo-physiology."

Anybody who has observed the ways of young puppies would have sufficiently seen, we should have thought, that sleep, and much of it, was essential to their existence. But the craving for "new knowledge," so-called, at first hand, is irresistible, it appears, in some women as well as many men. We fully endorse our able contemporary's remarks on the subject.

PROFESSOR BURT WILDER, writing in *Science* (December 17th), recommended the dissection of cats and dogs as a legitimate school exercise for young children. He says "the squeamishness that would induce reluctance to handle a 'specimen' is commonly an artificial condition induced by the ignorant or thoughtless interference of parents or teachers." After anatomy naturally follows experimental physiology (*vide* Mr. Furneaux's book). A choir boy, told to mind his vowels, said he did not know what they were. Asked what they taught him at the Board School, he promptly replied, "Science, sir!" Grammar, in the language of the restaurants, is "off." Science is the mental pabulum of the day.

APROPOS of this, a correspondent of the *Catholic Times* complains that certain officials can only spell proper names when they are written down for them, and adds that "perhaps the *alumni* of the Board Schools do not go in for such trivialities; a smattering of the 'ologies' or the dissection of cats seems to constitute the higher branches of education according to the principles which govern our modern civilization."

DR. C. L. GREENE suggests the operation of tracheotomy as the *dernier ressort* in intractable vomiting. "The idea," says *The Practitioner*, "which is supported by experiments on dogs, is that vomiting is impossible if the glottis be kept open." No doctor would dream of performing such an operation for vomiting in the case of a *private* patient, but as dogs have been submitted to it doubtless the usual course will be followed.

THE disease known as Cirrhosis of the Liver is commonly called "Gin-drinker's Liver," because alcoholic abuse has always been held to be its most frequent cause. Lancereaux says (*Académie de Médecine*, Sept. 7th), however, that he has produced in rabbits, guinea-pigs, and dogs, by feeding them on sulphate of potash, a disease of the liver exactly like that seen in drunkards. The attempt has been made in consequence of the results of this experiment to relieve alcohol of its sole responsibility for this deadly malady, and to show that the plastering of wines and the use of sulphate of potash in beer is the principal factor in the mischief. As all experience goes to prove that spirit drinking is the chief offender, it will take a good many of these cruel experiments on animals to upset the well ascertained conclusions of clinical observation.

SOME experimenters have failed to produce cirrhosis in animals by giving them alcohol, but were able to do so by giving them large quantities of bacterial cultures by the mouth. "Ramond," says *The Practitioner*, "having repeated his observations on animals," could not succeed in producing cirrhosis by dosing them with bacterial products. Thus does one experimenter contradict his brother researcher and "make confusion worse confounded."

THE *British Medical Journal* (February 12th), quoting Dr. Photiadès (*Arch. Générales de Méd.*, January, 1898), shows that endless confusion has recently arisen in the study of diphtheria. It has often been the duty of *The Zoophilist* to expose the unscientific character of much that has been claimed to the credit of serum-therapy, and we are glad that at last it is admitted that our criticism on the new treatment is justified. It is confessed that "to adapt the new facts of bacteriology to one's clinical knowledge becomes more and more difficult." It is affirmed that diphtheria is a much more

common disease than is usually supposed; in fact, every sore throat is suspicious. A common catarrhal sore throat may contain the deadly bacillus.

STATISTICS, says the *British Medical Journal*, have been made to prove (1) that the serum treatment has almost suppressed mortality; (2) that since this treatment was begun, the mortality is as high as ever. The serum is declared to have increased the mortality at Trieste, St. Petersburg, and Moscow; at Paris, Berlin, Vienna, and Buda-Pesth it is said to have lowered the death-rate; while at Leipzig, Milan, and London it has had no influence on it at all. In Boston, New York, and Brooklyn the cases have increased enormously, and the mortality is as high as in the worst years since 1882.

AT the June (1897) meeting of the American Medical Association, Dr. Thomas Powell read a paper entitled "The Germ Theory Disproved," which has just been published in the *Medical Brief*. The paper is noteworthy from the fact that the germ theory of disease has really been given up as untenable by medical scientists, however they may disguise the matter. It was a bold thing for Dr. Powell to tell the famous organization he addressed that—

"No experiment can be justly deemed adequate, unless it be performed upon either the human body itself, or that of some animal of equal vital tenacity—a requirement which seems never to have been thought of by the bacteriologists. Rabbits, guinea pigs, and mice—the chief subjects of bacteriological experimentation—are proverbially deficient in this very particular. The inoculation of such for the determination of the questions at issue is, therefore, too utterly farcical to justify any attempt whatever of refutation."

DR. POWELL maintains that the germ theory stands in absolute contradiction of every precedent known to the annals of scientific discovery, and is utterly disallowed by all legitimate experimentation. Bacon and Descartes were the originators of the modern methods of scientific discovery. It was they who proclaimed that for the attainment of scientific knowledge we must analyze and reject every element as hypothetical which this analysis does not spontaneously afford; experiment should aid observation and no generalisation should be attempted till the relative analysis has been completely accomplished.

BACTERIOLOGY cannot be a science, argues Dr. Powell, because science is knowledge, and all knowledge is a unification of the multiple. But the germ theory, so far from unifying the multiple, tends but to complicate and mystify. "The basis of all scientific explanation," says Bain, "consists in assimilating a fact to some other fact or facts." It is generalizing, and generalization is the apprehension of the one in the many, but bacteriology, on the contrary, is only the apprehension of the many in the one, while, as Jevons declares, "science arises from the discovery of identity amid diversity."

To put the question in its simplest form. The Klebs-Loeffler bacillus is claimed by the bacteriologists to be the cause of diphtheria; but in many of the worst cases this germ cannot be found. In many cases of common catarrhal sore throat the famous bacillus is readily discovered, and no harm accrues—the disease often cures itself. Test this by the rules laid down by the great scientists and logicians named above, and we can only wonder how "the hypothetical fledgling," called the germ theory, ever found its way into the pantheon of science.

VIVISECTION AT THE BOARD OF AGRICULTURE.

A laboratory having been opened and vivisectioners licensed and certificated to perform experiments therein in connection with the Board of Agriculture, it was deemed desirable to make enquiry as to the authority for this extraordinary innovation. The following correspondence consequently ensued :—

[Copy.]

NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET,
LONDON, S.W., the 12th January, 1898.

The Right Honble. The President of the Board of Agriculture.

Sir,—We were aware that last year licenses and certificates were issued under the Act 39 and 40 Vic., c. 77, enabling Messrs. A. C. Cope, M.R.C.V.S., and W. Duguid, F.R.C.V.S., to perform vivisection of animals without anæsthetics at the laboratory attached to the Department over which you preside. But as they reported that they had performed no experiments it seemed unnecessary to make any comment on the matter.

An announcement has, however, now been made in the press, that these gentlemen are setting to work to vivisection animals under these certificates, and in the precincts of your office.

If these gentlemen are embarking upon what is known as the Pasteur test for rabies there can be no manner of doubt that very great suffering for the animals used is involved.

The torturing of animals being held to be morally detestable by a large section of Her Majesty's subjects, the practice of it in a Government office at the public expense, unless expressly sanctioned by Parliament, seems to us to call for the most strenuous protest.

We, therefore, respectfully desire to be informed what express sanction from Parliament this new development of official activity has received?

I beg leave to remain, sir,

Your obedient servant,

STEPHEN COLERIDGE.

[Copy.]

BOARD OF AGRICULTURE, 25th January, 1898.

Sir,—I am directed by the Board of Agriculture to advert to your letter of the 12th inst, addressed to the President, and, in reply, I am to say that the conduct of the experiments to which you refer, by the veterinary officers of this Department instead of by investigators not working under the control of the Board, has been found to be necessary in order to enable the Board to efficiently discharge the duties devolving upon them in relation to rabies in dogs under the Diseases of Animals Acts, and no further statutory authority for the purpose appears to them to be necessary.

As you are aware, the experiments are conducted under all the safeguards imposed by the Act 39 and 40 Vict. cap. 77, the necessary licences and certificates having been obtained by the two officers in question.

I am also to point out that in the event of the success of the operations now being undertaken by the Board with a view to the extirpation of rabies in this country, experiments such as those in question would practically become unnecessary, a result which the Board would welcome as gladly as the Society which you represent.

I am, Sir, your obedient servant,

T. H. ELLIOTT, Secretary.

Hon. Stephen Coleridge, Hon. Secretary,
The National Anti-Vivisection Society, 20, Victoria St., S.W.

[Copy.]

20, Victoria Street, London, S.W., 14th February, 1898.

SIR,—I am obliged for your letter of 25th of January, which my Committee has duly considered.

I am desired to say in reply that you are right in supposing that we are aware that the vivisections conducted in your department take place "under all the safeguards imposed by the Act 39 and 40 Vic. c. 77," but we are also aware of what these safeguards consist, viz., 1, of the issuing to the Vivisectioners certificates excusing them from using anæsthetics; 2, of subjecting them to the inspection of Dr. Poore, a well-known supporter of the practice of vivisection.

Such "safeguards" do not seem to my Committee very reassuring.

This Society is not alone in regarding the inspection under the Act mentioned as no safeguard at all.

The Royal Society for the Prevention of Cruelty to Animals in its seventy-third Annual Report, pages 140 and 141, alludes in strong terms to this matter, and will show you what a Society representing an enormous number of humane people thinks of the inspection of Dr. Poore and the safeguards to which you allude.

I remain, dear sir, your faithful servant,

STEPHEN COLERIDGE.

T. H. Elliott, Esq., Secretary, Board of Agriculture.

[Copy.]

NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET,
LONDON, S.W., January 27th, 1898.

Sir,—The Committee of the Society have learnt that Mr. Cope and Mr. Duguid, returned as each holding a licence and certificate for vivisection in 1896, are still employed at the laboratory attached to the Board of Agriculture, Whitehall Place.

I am respectfully to inquire if this is the case, and also if you will kindly inform my Committee what licences and certificates these gentlemen respectively hold?

I am, Sir, your obedient servant,

BENJN. BRYAN, Secretary.

The Right Honble. The Home Secretary,
Home Office, Whitehall.

[Copy.]

WHITEHALL, 5th February, 1898.

Sir,—With reference to your letter of the 27th ultimo, I am directed by the Secretary of State to inform you that Mr. A. C. Cope is chief veterinary officer, and Mr. W. Duguid is assistant veterinary officer, under the Board of Agriculture, and they both hold licences under 39 and 40 Vic., cap. 77, with certificates A., F., and B.

I am, Sir, your obedient servant,

CHARLES S. MURDOCH.

The Secretary to the National Anti-Vivisection Society,
20, Victoria Street, S.W.

VIVISECTIONAL TEACHING IN LONDON
BOARD SCHOOLS.

At intervals, for some years past, a handbook of *Animal Physiology*, by a Mr. Furneaux, has been brought to the notice of the Society, which a few years since earnestly protested to the London School Board against its use as a text book for teachers. More recently the book has been brought to the notice of candidates for the School Board at election times, and, in the course of the last election, the Electoral League obtained pledges from a majority of the candidates returned that they would take action in regard of the volume, should they get the power. Mrs. Mona Caird seems to have become a little impatient, and consequently wrote a lengthy letter to the *Daily Chronicle*. This was published on the 29th of January, and brought out several other interesting letters, all which we append, and which will serve to illustrate the present position of the question.

(FROM THE "DAILY CHRONICLE," JANUARY 29TH.)

SIR,—The fact to which I hope you will allow me to call the attention of your readers will probably appear to them as incredible as it appeared to me when I first heard of it.

I was then half tempted to take the usual comfortable course of deciding that somebody had been "misinformed," a word almost equal to "Mesopotamia" for tranquillizing purposes! But where and how could the misinformation have been acquired that the London School Board had authorised, for the use of pupil teachers, a book on physiology in which painful experiments on living animals were described in detail? That a body of English men and women should select such a text-book for the instruction of children seemed to be almost beyond belief; but inquiries made at headquarters settled the matter. An official acknowledgment was

made that Furneaux's book on physiology had been authorised by the London School Board for the use of pupil teachers. Now, of course, I am not here opening up the vexed question as to whether human beings are justified in trying to thrust their own pains and penalties on to the shoulders of their weaker brethren of the animal kingdom; nor whether the laws of the universe, moral and physical, are of such a nature that increased well-being is likely to be the eventual reward of that system of vicarious punishment. What we are now concerned with is the ominous fact that the children of this country are being familiarized with the idea of the dissection of living animals; and that their instructors are teaching them, by inference (and therefore by the most impressive of all methods), that an animal may be cut up in order to see how its internal mechanism acts, just as a mineral specimen might be broken up, in order to examine its composition. A child, of course, cannot follow the arguments by which vivisection and their friends satisfy themselves that these experiments are "necessary" and justifiable. There is indeed, in Furneaux's book, no hint of justification, and nothing to indicate that it is called for. The experiments are described in a perfectly matter-of-course manner, and the unspoken inference is unavoidable: that if one wants to see how an animal works, one takes him and opens him, and makes experiments on his organs till one finds out! If a child taught in this manner were to take the first cat or puppy and try the experiments for himself, he could scarcely be justly blamed. Sentences of the character of the following occur at intervals throughout the book, the mind of the pupil being thus gently prepared for the detailed description of a vivisection which is given latter on:—

"We derive our knowledge of the functions of the cerebrum partly from experiments on the lower animals. When the cerebrum is diseased or injured, the power of manifesting mental faculty is more or less lost; when the cerebrum of an animal is removed, the animal is deprived of all power of voluntary movements" (p. 182).

"When an animal has had its cerebellum removed, it can move any voluntary muscle at will, but it cannot walk or fly" (p. 182).

And so on in the same strain.

On page 188 occurs the following:—

"In order to study the functions of the roots of the spinal nerves it is necessary to perform experiments on living animals.

"(1) If the spinal canal of an animal be laid open, and the anterior roots of the spinal nerves supplying a certain limb be divided, the animal will lose all power of voluntary movement in that limb . . . but the power of sensation in the limb will remain unimpaired. If, now, we irritate the ends of the cut roots which remain in contact with the cord, no effect will be produced—i.e., the animal will show no sign of pain. . . . But if we irritate the other ends, the muscles of the limbs contract violently.

"(2) If we divide the posterior roots supplying a certain limb . . . the limb may be pinched or even burnt without producing any sign of suffering. Again, if we irritate those ends of the posterior roots still in contact with the cord, the animal will exhibit unmistakable signs of the most acute pain."

If the child has followed the instructions of the author, he has been in the habit of examining dead animals, or portions of them; he is familiar with the processes of dissecting, and perhaps of killing, or is used to seeing death inflicted; for Furneaux generally instructs that the animal should have been killed immediately before the examination.

Is it necessary to point out the inevitable effect of all this on the mind of the child? Surely the dissection of dead animals is in itself a most unsuitable and brutalising work for children; but when the text-book which gives directions for such work goes on to describe the dissection of living animals (as a branch of the science in which the more advanced students and the professors are engaged), then it is surely time for the influence of the public to be exerted at School Board elections, if milder forms of remonstrance have no effect.

This is not a question for opponents of vivisection alone, but for all who realize that the children in our schools to-day will be the citizens and rulers of the State to-morrow; and that teaching such as I have described (be vivisection right or wrong), must, beyond all question, tend to weaken the best

instincts of the child, and to stimulate those impulses of cruelty and selfishness which are the root-cause of all the misery and trouble of life and the eternal obstacle to social improvement. Surely there is enough that is cruel and savage in human nature without going out of one's way to educate it in our schools! Of what avail is it that a child should have vividly impressed on his mind, by means of the description of an animal's martyrdom, the exact functions of the sensory or motor nerves, if at the same time his sense of pity is blunted, his chivalry is weakened, and all the better teaching which he receives (it is to be hoped) is made to seem ridiculous in his eyes, since it is in flat contradiction with what he is taught by his instructor in physiology?

Alas, it is so much easier to excite the cruelty of the human being than to persuade him to compassion. How many boys would select the counsels of mercy if they might select those of ruthlessness? It is not a little astonishing to find that we are actually teaching cruelty on a grand scale, and in the most powerful manner in which it can be taught, to our children; while later on we seek to obliterate the impression that we have thus made; to counteract the effects on society of that same spirit of cruelty, by elaborate and expensive institutions, reformatories, moral instruction leagues, prevention of cruelty societies—all involving a tremendous output of thought, energy, and money. These laborious efforts nevertheless fail to make good the evil we have wrought, or to effect what might be so easily effected in the first ten or twelve years of school life, by humanising influences, to which children so readily and gladly respond.

Animals, be it remembered, afford to the child his first taste of power. An animal is the first creature that he can bully or torment with impunity, and therefore from the teaching which his elders give him regarding his treatment of a creature weaker than himself, his character receives its earliest bent towards chivalry or tyranny, generosity or baseness. Perhaps there never was a time when the necessity of keeping alight the spirit of chivalry in the human heart was more desperate than it is at present, when the spread of superficial knowledge is going on at an ever-increasing pace, without a corresponding raising or securing of the moral standard.

Small quantities of scientific, or historical, or mathematical facts are inserted into the midst of the children, but no effort seems to be made to humanise the character, broaden the intelligence, or draw out the finer qualities of the human being. Yet that is the sort of education which alone can avert the perils of our present condition of much teaching and little training. I think there is no more significant or grievous sign of the dangerous direction in which we are tending than the fact that such a work as Furneaux's has been authorized for the instruction of children by those who have been entrusted with the care of our national education.—I am, Sir, yours, etc.,

January 28th.

MONA CAIRD.

(FROM THE "DAILY CHRONICLE," JANUARY 31ST.)

SIR,—Mrs. Mona Caird will be glad to hear that at the first meeting of the Sub-Committee of Pupil Teachers' Schools of the present School Board for London (held on December 13th), the question of paragraphs in text-books on Human Physiology having reference to Vivisection was under consideration, and that steps are now being taken to deal with the matter.

Meanwhile, and without canvassing the question now under discussion, I venture to point out that Mrs. Caird's suggestion that Vivisection is being taught to the children is altogether wide of the mark. Vivisection is referred to inferentially in a text-book on physiology bought at their own expense by the pupil-teachers under the sanction of the Board. Which is a vastly different state of things from that detailed in her letter.—I am, Sir, your obedient servant,

T. J. MACNAMARA,
Chairman of the Sub-Committee on
Pupil Teachers' Schools.

School Board for London, Victoria Embankment, W.C.,
January 29th.

(FROM THE "DAILY CHRONICLE," FEBRUARY 2ND.)

SIR,—With reference to Mrs. Mona Caird's letter on "Furneaux's Physiology," I should like to say that her quotations are evidently taken from the early editions of the

work in question, as the seventh edition, which is now before me; differs materially from the first edition, against which I, with others, strongly protested some years ago. It has been modified in response to that protest, so that on p. 188, in place of the words, "It is necessary to perform experiments on living animals," we now read "The functions of the roots of the spinal nerves have been ascertained by experiments." In place of the remark "If, now, we irritate the ends of the cut roots [of the nerves], &c.," we have "If now those ends of the cut roots . . . be irritated"; and so on in similar instances. At first sight the difference in these ways of presenting the lesson may not seem important, but in the old edition there was a direct incentive to experiment on a living animal by vivisection; in the last edition we have merely the statement of a fact. Although I strongly object to the passage, even in its modified condition, I admit the improvement, and gladly recognise it as a concession to public humanitarian opinion. The author having done so much may yield still more to our pressure.

I am not altogether satisfied with Mr. Macnamara's distinction between "pupil teachers" and "children." Nobody suggests that experimental physiology is taught in the lower classes of our Board Schools, but pupil teachers themselves are often extremely young persons, and I heartily join with Mrs. Caird in her objections to the inculcation of cruelty to young persons of whatever age.—I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S.

Tynemouth House, Victoria Park Gate,
London, E., February 1st.

(FROM THE "DAILY CHRONICLE," FEBRUARY 3RD.)

SIR,—I am indeed glad to learn from Mr. Macnamara's letter in your issue of January 31st that the sub-committee on pupil teachers' schools of the present London School Board is taking into consideration the question of the paragraphs on vivisection, in physiological manuals used for the instruction of pupil teachers. I wish, however, that I could believe that my letter was as wide of the mark as Mr. Macnamara suggests. I can assure him that nobody would be better pleased than I if he could convict me of exaggeration or mis-statement in this matter. I can only repeat what I said in my letter: that I made inquiries at head-quarters before making any statement, or even believing that such a book had been sanctioned, and that I was informed that the School Board had authorized the work for the use of pupil teachers. It was not stated that the pupil teachers had to buy it themselves, therefore I could not mention this; but I do not think it makes any material difference who paid for the book. The important fact was that the London School Board had allowed the work which contained the quotations which I gave, and others like them, to be used for instruction in their schools (whether in all or only in some I do not know). The fact that the children who are specially authorized to use this book are pupil teachers seems to make the objection if anything more serious, since it is the pupil teachers who are chosen from among the pupils to influence and instruct the rest. From my point of view, therefore, such a policy is parallel to that of poisoning our water supply at its very source.—I am, Sir, yours truly,

February 2nd.

MONA CAIRD.

QUESTIONS AT THE SCHOOL BOARD.

The question was raised at the meeting of the School Board, on February 10th, when Mr. Key asked the Chairman of the School Management Committee if his attention had been previously called to Mrs. Mona Caird's letter to the effect that Furneaux's book on physiology had been authorized by the Board for the use of pupil teachers, and that in the book painful experiments on living animals were minutely described.—Mr. Graham Wallas, in his printed reply, stated that the passages quoted by Mrs. Mona Caird were apparently taken from an early edition of the book. In the fifth edition (1893) and in later editions—the edition at present in use being the seventh—the passages cited show important variations. The Sub-Committee on Pupil Teachers' Schools reported at their last meeting that they had the matter under their consideration, and would hereafter submit a recommendation.

CHRISTINA ROSSETTI AND VIVISECTION.

The Rev. C. E. Tyrer, writing on this subject in the *Liverpool Daily Post*, on the 4th of February, observed:—

"There is a passage in the review of Mr. Mackenzie Bell's study of Christina Rossetti in your issue of to-day which ought not to be passed over without comment. You say:—'Like many women who are incapable of subordinating sentiment to reason, she was anxious that vivisection should be made penal.' Now, what is 'sentiment,' and what is 'reason'? 'Sentiment' and 'reason' are two of the most ambiguous terms in the English language. They may be used so as to cast an unfair colour upon any course of action which its opponents find it convenient to meet with ridicule rather than with legitimate argument.

"Any line of conduct which is dictated by unselfish motives may be, and often is, derided as the offspring of sentiment, while, on the other hand, that which looks to selfish ends is applauded as the outcome of reason. Thus the movement for the abolition of the slave trade in the British dominions was at the time derided as sentiment by those who objected to it, and doubtless before the passing of the Mines Regulation Act (1872) many mineowners and their friends considered the agitation against the employment of children underground as a miserable appeal to sentiment. And yet it will be admitted almost universally, both in these cases and in many others, that those who were derided as sentimentalists were, after all, absolutely in the right, and that the derided 'sentiment' was indeed a noble thing—the 'sentiment' of justice or the 'sentiment of mercy,' or both. Nay, may not Christianity itself, with its appeals to man's higher nature and to brotherly love—Christianity which, it may be said, introduced a new principle into the world, of which the hospitals, asylums, havens for the poor, and all the widespread agencies of benevolence which distinguish Christendom are but the flower and the fruit—by parity of reasoning be mocked at, as based upon sentiment and upon sentiment alone?

"In precisely the same way, those who hold that it is unlawful and immoral to torture innocent animals for the sake of possible benefits which may accrue thereby to the human race are constantly derided as 'sentimentalists;' while 'reason,' with which we naturally associate the noblest faculties of the mind and their application to the noblest purposes, is arrogated exclusively by those who, in contrast with the so-called 'sentimentalists,' base themselves upon the pre-eminence of material ends over every other consideration."

LATTER-DAY STARVATION EXPERIMENTS.

(FROM THE "GLASGOW EVENING TIMES," FEB. 4TH.)

SIR,—Being a regular reader of the *Evening Times*, I noticed, on taking up a copy dated the 20th of January, which had happened to escape being put out of the way, that I had not paid proper attention to the article dealing with the lecture delivered by Dr. Robert Bell on "Food and Health," at which ex-Treasurer Gray was in the chair. In the course of his lecture he made reference to the various kinds of diet that both man and beast ought to be supplied with, if health and longevity were to be taken into account. He instanced, as a proof of what he argued, his own experience in experimenting upon five dogs. He says they all died (with the exception of one that had been given milk) of starvation within 25 days, the four that died having been given liquids of different kinds, one of the dogs having been given nothing but water. To make the proof stronger still, he adds, "I repeated the experiment." Now, sir, what I wonder at is that no able commentator has taken up his pen in denunciation of such revolting cruelty, and I also wonder whether the Society for the Prevention of Cruelty to Animals have got notice of it. Dr. Bell will no doubt be thinking he has done great service to the public by giving this information, more especially as he may consider himself the author; but it is my opinion, and an opinion I will never change, that Dr. Bell ought rather to blush when relating such a shocking tale. If Dr. Bell is anything of a doctor at all, he might have known, judging by the gradually emaciated appearance of the eight dogs he so cruelly put to death, that they would eventually die, and I think the public would have given him more credit if he had put a stop to the brutal treatment, and his lecture would have been quite as convincing.—I am, &c.,

ANTI-CRUELTY.

VIVISECTION, WHOLLY UNRESTRICTED, IS INDEFENSIBLE IN A CIVILIZED COUNTRY, BECAUSE OPPOSED TO THE DIVINE LAWS OF JUSTICE AND MERCY, AND DESTRUCTIVE OF THE HUMANE INSTINCTS OF THE COMMUNITY.

VIVISECTION, RESTRICTED EFFECTUALLY, SO AS TO EXCLUDE TORTURE, IS IMPRACTICABLE, BECAUSE THE RESEARCHES FOR WHICH IT IS EMPLOYED ARE, IN THE MOST IMPORTANT DEPARTMENTS, VITIATED BY THE USE OF ANÆSTHETICS; AND BECAUSE NO LEGISLATIVE SAFEGUARDS CAN BE ENFORCED ON BEHALF OF CREATURES BOUND UPON VIVISECTING TABLES BEHIND THE CLOSED DOORS OF A LABORATORY.

THE ZOOPHILIST.

LONDON, TUESDAY, MARCH 1st, 1898.

VIVISECTIONAL TEACHING IN SCHOOLS.

It was a powerful and serious indictment which Mrs. MONA CAIRD made out in her letter published in the *Daily Chronicle* of the 29th January, and reproduced in our own pages to-day. The gist of it was that in a book, the use of which is authorized by the London School Board, experiments on living animals are spoken of in a perfectly matter-of-course manner, just as though they were quite a part of ordinary teaching and involved nothing to be specially objected to. It was quite well, therefore, and very useful, that Mrs. CAIRD should sound a note of alarm; not that she sounded it for the first time by any means. Six or seven years ago the Victoria Street Society raised the question and pressed the then School Board upon it. The answer then was that though Mr. FURNEAUX, the author of the book, was an officer of the Board, the work itself was due to his private enterprize, and it was stated that it was not on the official list of works authorized for use in the London Board Schools. Still, it was admitted that it might be and was used in some of the schools for pupil teachers; and Mr. MACNAMARA, as will be seen elsewhere, has written in reply to Mrs. CAIRD that "vivisection is referred to inferentially in a text-book on physiology bought at their own expense by the pupil teachers under the sanction of the Board." That, no doubt, was meant to convey the impression that therefore the children were in no danger of being taught such things. But the sole object of training teachers in various branches of knowledge is to equip them to impart such knowledge to the pupils who may come under their care hereafter. Hence, the question of teaching to children is directly raised. But we believe Mr. MACNAMARA is not unfriendly to the object in view, and therefore we do not desire to criticise him too severely for the utterance which we have quoted above. We will only remark upon it that it was a pity he raised so transparently inadequate an argument, even if it was intended merely as a temporary screen for himself and his colleagues.

The book to which objection has been taken is most objectionable from many points of view, especially from that of feeding the taste for cruelty which seems to be innate in children, and which needs to be repressed rather than fed, as Mrs. CAIRD in her argument so well shows. A good deal has been heard of late of the dissection of cats in schools in America, and the example is contagious. Mr. FURNEAUX's book, which has now been in debate for a long period, inculcates the precepts of vivisection; its use seems to have been pushed, and to have increased in spite of almost constant protests; and although some concessions, as Dr. BERDOE's letter shows, have been made, yet they are insufficient, and unless the pressure of objection is maintained there is no safeguard against the author of the book, and others who may be behind him, proceeding a step further. It is gratifying to know that by the efforts of some of our ardent friends of the Electoral Anti-Vivisection League when the election was in progress, a majority of the members of the present School Board for London are pledged to have the book further modified, or to prevent its use. The proper Committee is, in fact, already considering the subject, so that we may well hope and expect that with the added publicity which Mrs. CAIRD's letter has given to the objections to the book in question, we may now soon see it modified to a much further extent or withdrawn altogether.

THE PHYSIOLOGICAL FRIVOLITIES OF 1897.

THE *Times* in its issue for January 26th contained an important article on "Science in 1897." It was a summary of the progress made during the past year in chemistry, physics, electricity, astronomy, and physiology, and, so far as the last subject is concerned, was of the usual stock-taking character, in which great cry is made about exceedingly little wool. The writer, indeed, must have had as much difficulty in furbishing up sufficient matter to make a column in the leading journal as some insolvent tradesmen who put the few goods they possess in their shop windows, leaving the shelves within all but destitute of stock. The writer begins by stating that one of the most interesting events in the physiology of 1897 was the meeting of the physiological section of the British Association in Canada. No doubt the members of that garrulous body of peripatetic sciolists who perform their personally conducted tours under the direction of such *savants* as may be inclined for a holiday at that pleasant time of the year greatly enjoyed their transatlantic outings, and considered they were also doing their duty in burning incense at the altar of the great deity of the age; but if that event is to be considered one of the most interesting in the physiological year, we fear that humanity at large has not benefited greatly by laboratory research in that period. Professor MICHAEL FOSTER referred to the discoveries of RAMON-Y-CAJAL, and the *Times* thinks it "very interesting that, after her long scientific trance, it is from Spain the 'newer light' should come to beat upon the 'throne of

reason.'" Surely it is only natural that Spain, the quondam habitat of the Inquisition, and the home of the bull fight, should throw itself with enthusiasm into physiological research.

Professor STEWART has made some researches concerning the time taken by a particle of blood to make its circuit of the body, and upon the quantity of blood ejected by the heart at each beat. These may be interesting from a merely speculative point of view, on practical medicine they have but the faintest bearing, as the blood-pressure, the heart-beat, and circulation time, vary enormously under the modifying influences of disease and environment. Professor PORTER, we are told, "showed a most instructive experiment *a propos* of the cause of heart-beat" which we are given to understand is "an old problem in physiology." The latest theory is that the nourishing influence of the circulating blood, not anything conferred upon it by the nerves, is the cause of the beat. Professor PORTER perfuses blood through the artery of an "isolated strip of the ventricle of a dog's heart" to demonstrate this; but somebody is certain to do something else to another dog's heart to prove the contrary, so that "the old problem" will doubtless still remain for solution. The measurement of the friction of the blood in passing through the blood vessels occupied the attention of Dr. HÜRTLE with what useful result, if any were aimed at, it is difficult to imagine. The hydrostatics of the blood-pressure were dealt with by Professor WAYMOUTH REID, and we are informed that the inference from his experiments thereon are "far reaching," which we can readily believe, as they are quite beyond our own limited field of vision. Professor LANGLEY has discovered that a nerve impulse which normally makes the hair stand on end can be diverted by cutting the nerve and making a new connection, so that it will dilate the pupil of the eye. This is a good illustration of the scientific value of Vivisection. As a physical fact this experiment has its interest, but if it be claimed that such physiological trifling advances the healing art we are at issue with the researchers. We have long known that we can successfully join cut nerves and re-establish their function; this is a common surgical operation. To make the nerves which erect the hairs on a cat's tail perform the function of opening its eyes is an example of laboratory frivolity for which we object to yield up the organisms of the lower animals.

Messrs. HILL and BARNARD have devised an instrument to measure the blood-pressure by strapping the apparatus round the wrist, a physiological plaything which will "have its day and cease to be" looked at. A number of experimenters in Edinburgh have made the remarkable discovery that good training and suitable diet are the things on which to do heavy muscular work. We were under the impression that all this was known to St. PAUL and the Ancients. Dr. HALE WHITE of Guy's, has discovered by an "admirable" method of "physiological research" that "fever is not due to the same cause in every case." Nature sometimes arranges

by increasing the temperature of the body to "stew" disease germs "in their own juice." We have always believed strongly in the *vis medicatrix natura*, but do we not owe the multitude of antipyretics or heat reducers to the physiologists themselves? Is not the barbarous iced bath in fever a physiological suggestion? Dr. WHITE says:—"It is quite possible that if a phthisical patient's temperature could be safely kept at 108° F. for a month, he might be cured." That is to say, if the patient were not baked to death the germs would perish. We know all about this method of cure. The *Daily News* of December 2nd, 1887, reported a pretty little experiment of the kind. A patient suffering from woolsorters' disease in Bradford "was removed to the infirmary at a late stage in his illness, a course which it was frankly owned might have hastened death in this instance. . . . It was desired to increase the temperature of the patient's body to 107° in order to kill the bacilli—the bacilli were killed, but so was the patient." The *Times* thinks the logical thing to do is to increase the temperature of the patient "so as to stew the germs." To stew or not to stew, that is the question now agitating the medical mind. Till it is decided we incline rather to fall into the hands of Dame Nature than into those of the bacilli hunters.

This then is the sum total of the physiological results of 1897. The work done may have afforded amusement and occupation to certain specialists, and proved interesting to dilettante doctors, but so far as practical results to the healing art are concerned, we can but describe it as physiological frivolity.

CORRESPONDENCE.

VIVISECTION AND THE CRUELTY IN NATURE.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—The apparent cruelty in Nature is a most difficult problem to the thoughtful mind, and recently in a meeting an opponent stated his opinion on the point, saying that "Nature appeared to him to be an Almighty vivisectioner." I leave the answer to be given to this attitude of mind to others, and beg to point out what seems to me to be the duty of everyone who regrets this apparent cruelty in Nature.

In the sphere of human society man is absolute, his influence can assert itself everywhere, the pains and suffering that now exist can be removed by understanding and obedience to the laws of life, and a true development of his moral nature. Emerson says, "The externals of our lives are the expression of our spiritual natures;" and directly men become sincerely desirous of putting all forms of cruelty away from them that moment the power will dawn to enable them so to do, and attempts to justify vivisection by analogies of storms or biting frosts seem to me quite fallacious; at least men might try to imitate Nature in her smiles rather than in her frowns.

Is it not true that vivisection is opposed to the orderly progression of truth-finding, and must in consequence lead into doubt rather than truth? Surely in the economy of Nature cruelty cannot be the basis of man's physical salvation.—I am, Sir, yours truly,

Bristol, 20th January, 1898.

T. A. WILLIAMS.

"LESSER MEASURES."

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—As you will no doubt receive many expressions of opinion, I make no apology for adding to the number. I think Mr. Coleridge's letter is most depressing—a tremendous come

down—and I do not know what has happened just lately to change the front which the Society has always presented. The one thing we have been emphatically taught, and which has been insisted on every month in the Society's journal, is that "painless vivisection" is *impracticable*. If this is not so, what shall be said of the past twenty years' policy of the Society? And is not the increase in vivisection the very thing which is likely eventually to arouse public opinion and attention, and so gain the object we have in view? Also, how is it *possible* to forecast events and say that total abolition has no chance?—whether or not in *our* lifetime is of minor importance—at any rate it can never spring from measures which would effectually silence public indignation.

I am very sorry Mr. Coleridge's letter has been *published*, as it is calculated to make many lose heart, and gives the impression that the Society has done no good in the past and exists for no tangible purpose in the future. Practically to acknowledge ourselves beaten with small hope of benefiting the animals any more than can be done by any other society (such as the R.S.P.C.A., and, indeed, left to them), will, I think, be disastrous.—I am, dear Sir, yours faithfully,

ALFRED E. BEDDOW.

Norfolk House, Brighton, February 4th, 1898.

P.S.—Miss Cobbe did not compare "slavery with vivisection," but a Bill relating to Slavery with the Vivisection Act—a very different matter.

NEW BRANCH SOCIETY AT SUTTON.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—I have much pleasure in informing you that a Branch of the National Anti-Vivisection Society has recently been formed and established at Sutton, under the title "The National Anti-Vivisection Society (Sutton Branch)." I am acting as Hon. Secretary and Treasurer, *pro tem.*, of this new Branch Society. I hope, and believe, that it will live, and grow, and even go on growing, until that divine truth, which is implied in the word "*righteousness*," which this Society has been formed to foster and to proclaim, shall fill the whole earth. In the meantime we must work and fight. The life and growth of our Society will depend upon the number and activity of the members thereof. We have started well, but, of course, *we want more members*—as many as possible. To open the gate of membership very wide, I have put the annual subscription (sufficient to constitute membership) as low as 6d., though subscriptions are not limited to this or to any amount. If any one who reads this would like to become a member of our Society, and so help us, and will communicate with me, I shall be pleased to send to such person a form of application for membership. My address is Mulgrave House, Sutton, Surrey.—Yours faithfully,

SAML. HOPGOOD HART, JUNR.

Mulgrave House, Sutton, Surrey, February 15th, 1898.

HOME INTELLIGENCE.

MEETING AT SOUTHPORT.

On Tuesday evening, February 1st, a meeting was held in the Assembly Room of the Cambridge Hall, Southport, under the presidency of Mr. W. Garnett Flynt, who was supported by the Rev. T. Perkins, M.A., F.R.A.S., rector of Turnworth, Dorset; the Rev. Theodore A. Howard, St. Matthew's, Liverpool; Mr. A. J. H. Crespi, M.R.C.S., Wimborne; and others.

In opening the proceedings, the CHAIRMAN said he did not know of anything more important to them as a race than that which would engage their attention that evening, namely, vivisection, which meant the cutting of animals alive. Animals which were the subject of experimentation were cut while they were alive in order that men might see into their very organism, and seek for the causes of life, disease, and death. Vivisection was justified, *prima facie*, by the first principles of science. Man had risen from a barbarian of the wood, if not something lower, to a Herbert Spencer, a Darwin, a Newton, a Galileo, and other mighty men with sublime intellects. They had risen entirely by investigation into nature's operations. Vivisectionists claimed that they were doing the same thing, but the question was one entirely

of method, and into that question of method entered the question of morals. Hitherto they had supposed morality belonged simply to the human race, and that beginning there, it ended there. But now they were able to go further and say that morals likewise applied to the animals. Those who had studied the inferior order of beings on the earth would agree that those animals had their own moralities, strict and stern. The methods of the vivisectioners were decidedly objectionable, and that gave them a new point. It was, indeed, an expansion of what they started with in this country seventy-six years ago, when they admitted that animals had rights. What was called Martin's Act gave to animals something like the ordinary rights of human beings. Before that time animals were treated as though they had no rights whatever. Anti-vivisection was a further expansion of the principle which protected animals from ill-usage—from what he was compelled to call the infamies of science. Science meant knowledge, but in getting knowledge they were not permitted to trespass on the great principles of human ethics. Whilst seeking for truth and light as to the mystery of life and disease, they had to see that they went strictly on ethical lines. Anti-vivisection was not a fad of a few hyperæsthetic individuals. He (the chairman) considered that he was not of the number of the hyperæsthetics, and it was out of his devotion to science that he was present that night, as he had been on previous occasions, to protest against the methods which were used. It was only necessary to move among the students engaged in the practice to see how this excessive experimenting on living things could blunt the conscience. When a medical man had his conscience blunted he was to that extent incapable of fulfilling the highest functions of a medical man, the first of which was sympathy. A doctor who had no sympathy with his patient was a cold, callous, indifferent observing machine, making his records not to alleviate suffering, but to advance some particular view of his own, for the science of medicine was like theology, divided into many schools. This he had seen from his association with the medical students of Paris, and also in the German University of Bonn. Those students took a morbid interest in the sufferings of the animals to see how nature in her aberrations could go into extravagant forms. It led from one evil to another, and as they were all at some time or other compelled to consult medical men it was of the highest importance that medical men should be capable in every way and especially in sympathetic relation to the patient. He maintained strongly that that method of acquiring knowledge was a wrong one, simply because the conditions of the animals under experiment differed entirely from those of the human beings in whose interest the experiments were professedly performed. Further, the progress of science was so great that by means of the Röntgen rays they were able to see into the inner processes of life much better than by any of the processes adopted by the vivisectioners. (Applause.)

The Rev. T. PERKINS said the main arguments against vivisection were that it was unnecessary from a scientific point of view, that it was absolutely misleading from the same standpoint, and also that it was cruel, and therefore immoral. He proposed to confine himself to the last objection. As a medical man, Dr. Crespi would deal with the scientific side of the question, and their aim was to get vivisection prohibited entirely by law. Any discoveries made by a wrong method of research were hardly likely to be of any benefit to the human race. Referring to the work of the Pasteur Institute in Paris, he said that hydrophobia had increased in Paris since that hellish dog's home had been established. The British public was in danger of suffering very much from that fiendish system of vivisection, and if they knew it they would rise up and denounce it. (Applause.)

The Rev. T. A. HOWARD, answering the question why did they keep on with that agitation, said they wanted first of all to save the doctors from themselves. They did not want a noble profession degraded by the experimentation which was going on in this country, and which was increasing by leaps and bounds. They were not attacking the medical profession, but they wanted to remove a cancerous growth on the medical body. Further, they wanted to save themselves from the doctors, and from the spirit which seemed to have hypno-

tised them. Many times had his poor parishioners spoken to him about experiments which had been made upon them in various hospitals, but he had always pooh-poohed them under the belief that the doctors were actuated solely by a desire to effect a cure, but what he had learned of the vivisection movement during the last two or three years convinced him that the complaints were not without reason. They also wanted to save the animals from the fiendish cruelties which vivisectioners perpetrated upon them. As to the extent and nature of the practice, he quoted from a number of medical journals and reports. He also stated that there were men in Liverpool constantly going about on the look-out for stray dogs, for which they received a shilling per head for the use of vivisectioners at the Liverpool University College.

Dr. CRISP said he could not explain the great change which had come over the medical profession of late years, except that every profession, trade, and occupation had become more and more jealous of its own privileges. There were thousands of medical men who had never seen an experiment, but who expected the most wonderful results to flow from physiological experiments. If these experiments were few, insignificant, and painless, they would not be found opposing vivisection, but facts proved otherwise. The number of experiments made annually in England was about 7,000, and in Europe many hundreds of thousands of animals were subjected to those experiments every year. Vivisection was defended on the ground of the great discoveries to which it had led, but most eminent authorities denied that these discoveries, the circulation of the blood, for instance, could be attributed to vivisection, and further, that so far from its having led to discoveries it had done an incalculable amount of harm. (Applause.) As for Pasteur's method, he could not think of anything so ridiculous, and it was a fact that in France more deaths had resulted from hydrophobia since his system came into vogue than before.

At the close the CHAIRMAN heartily thanked the speakers on behalf of the audience, and expressed the hope that the statements which had been made that evening, and the arguments adduced, would convince all present of the desirability of furthering the anti-vivisection movement.

CHELTENHAM.

LECTURE BY THE REV. T. PERKINS.

A lecture on Vivisection was given in the Chess Club Room, Imperial Rooms, Cheltenham, on the afternoon of February 2nd, by the Rev. T. Perkins, M.A., F.R.A.S., Rector of Turnworth, Dorset. The "formality" of a chairman was dispensed with, but amongst those present were Gen. Winson, the Rev. J. Walker, Dr. Cook, Mr. Butler, Mr. J. James, and many ladies.

The LECTURER began by explaining that his object was to stir up feeling in Cheltenham with regard to the practice of vivisection and to start a local branch of the National Anti-Vivisection Society. Vivisection was opposed on three grounds—first, because it was unnecessary; secondly, because it was misleading; and thirdly, because it was cruel and consequently immoral. True the bulk of scientific or rather medical influence was against them; but that he explained on the ground that few doctors themselves vivisected. This was an age of advertisement, and much of the cruelty of which they complained was due to that spirit. On the other hand some were merely animated by a desire to gain fame by an increase of scientific knowledge, and the ordinary medical man, though he knew no more about it than any layman present, did not like to cut himself adrift from the leaders of the profession, and be looked down on as an ignorant faddist. At the same time the Anti-Vivisection Society could quote on their side such authorities as Mr. Lawson Tait, Sir Charles Bell, Dr. Chas. Bell Taylor, etc. There were endless opportunities for investigating every vital organ of the body without cruelty to animals. Though a believer in evolution and the Darwinian hypothesis, and acknowledging that there was a greater relationship between ourselves and animal life than many of us suspected, yet it was often misleading to draw inferences with regard to the human frame from experiments on animals. Vivisection would not stop at four-footed animals, and give some of them the chance, judging from the outspoken remarks of Continental physiologists, they would practice on hospital

patients and paupers. Already they were boasting of having succeeded in grafting cancer and transmitting the virus of yellow fever, resulting in the death of the unhappy people on whom the experiments were made. He quoted the published accounts of their own experiments by French vivisectioners, who declared that they took a keen joy in their researches. Referring to Great Britain, he said under the present system of licences, the number of experiments was increasing, no less than 7,500 having been made last year, while only two inspectors were employed to support the Act. He regretted the lukewarmness of his own Church on this question, and appealed for greater mercy and tenderness towards the humble forms of our own common life. (Applause.)

Dr. Cook asked what would be the nature of the legislation the lecturer would substitute for the present Act which protected wild animals?

The LECTURER replied that while he would totally prohibit vivisection, he would extend the protection of the law to wild animals in captivity.

The Rev. J. WALKER proposed a vote of thanks to the lecturer, which was seconded by Dr. Cook, and carried.

MANCHESTER (GORTON).

On Thursday evening, January 20th, a lecture was given by Mrs. H. Philips on Vivisection, in the Gorton Congregational schoolroom, under the auspices of the Gorton Women's Liberal Association. There was a fair attendance and great interest shown in the subject, questions being put to the lecturer afterwards.

SOUTH-EAST DURHAM ELECTION.

Captain D. Shawe, the honorary secretary of the Electoral Anti-Vivisection League, went to Stockton on the 28th of January to represent that organization in the above election then in progress. Alderman Richardson, the Liberal candidate, on being interviewed, declared himself on the Anti-Vivisection side, and promised, if returned, to support the cause in Parliament. On the night of his arrival, Captain Shawe, accompanied by Mr. Lloyd, his sub-agent and speaker, attended one of Mr. Richardson's meetings, where they distributed literature, and found that the leading men on the platform were on their side. Many miners were interviewed on the following day, the subject explained to them, and their goodwill obtained. Subsequently other towns in the constituency were visited, the electors being as far as possible interviewed and informed on the subject. On the evening of the 3rd of February a meeting was held at Stockton, at which there was an audience of 150 persons. Dr. Gibson, an Anti-Vivisectionist doctor, was discovered, and he attended with his wife, and Mrs. Cook (Mabel Collins) went over from West Hartlepool to be present. A deep impression was made. Mr. Richardson was the candidate returned.

LIVERPOOL.

A public meeting in support of the Liverpool Anti-Vivisection Society was held on Monday evening, February 7th, in the Congregational Schoolroom, Green Lane. The Rev. W. J. Scarlin presided, being supported by the Revs. E. N. Hoare, Theodore A. Howard, George Lord, etc. The Chairman having spoken against vivisection, the Rev. Theodore A. Howard addressed the meeting at length, strongly denouncing the practice of vivisection. On the motion of the Rev. E. N. Hoare, seconded by the Rev. G. Lord, it was resolved:—"That this meeting expresses its approval of the objects aimed at by the Anti-Vivisection Society, and pledges itself to labour for the abolition of vivisection." There was a large attendance.

SUTTON, SURREY.

For some time past a desire has been expressed to establish an Anti-Vivisection Society in Sutton, and as it was thought that the present time would be favourable for the formation of such a society, on Saturday, the 29th ult., an informal meeting of ladies and gentlemen was held for the purpose of starting one. Many who could not attend the meeting expressed their sympathy with the movement. Mr. Benjn. Bryan, Secretary of the National Anti-Vivisection Society, was present, addressed the meeting, and answered all questions that were put to him. At the close it was proposed, and unanimously determined, that an Anti-Vivisection Society

should be established, and that such Society should be a branch of "The National Anti-Vivisection Society." A committee was appointed to represent, for the time being, the Branch Society so formed, to procure the formal affiliation thereof with the Parent Society, and to frame rules for the regulation and working of the Branch Society. Mr. Saml. Hopgood Hart, Jun., was requested, and agreed to act as Hon. Secretary and Treasurer (*pro tem.*) of the Branch, and a number of members have since been enrolled.

THE SCOTTISH SOCIETY.

ANNUAL MEETING IN EDINBURGH.

The annual meeting of the Scottish Society for the Total Suppression of Vivisection was held on Thursday, January 27th, in the rooms, 5, St. Andrew Square, Edinburgh, the Rev. John Baird, president of the Society, in the chair. The meeting having been opened with prayer by Rev. Wm. Allan, M.A.,

The SECRETARY (Councillor Waterston) submitted the annual report and financial statement. The committee had to report that public interest in the great question of vivisection had not in any way waned during the past year, but, from various causes, had become greater than ever. The Jubilee year had led to a review of progress during Her Majesty's reign, but while from the medical point of view the most notable discovery had been chloroform, it had not been possible to connect that undoubted benefit with the practice of vivisection. It was greatly to be regretted that the Diamond Jubilee had been reached and that evil not yet abolished, but through the action of that and kindred societies vivisection had to be careful of their doings in view of the sensitiveness of the public mind in relation to cruelty that had been developed. During the year a considerable number of petitions had been presented to the House of Commons, and questions had also been put to the Home Secretary as to the correctness of the annual returns and the system of inspection. The committee were hopeful that during the ensuing session of Parliament some more decided action might be taken, and with the view of aiding such a step they had suggested a conference of members of Parliament favourably disposed, and representatives from the various societies in London to consider the action to be taken. The committee recorded with satisfaction that the Pasteur Institute for London had not yet been licensed, though they recognized that this year was not likely to pass without a determined effort being made to obtain the license. The committee had to say that the moral grounds of opposition to cruelty remained unchangeable, while the medical grounds were an augmenting quantity year by year. It could neither be reconciled with the claims of humanity, nor be made to yield results of reliable value. The committee, in fidelity to the highest interests, could not relax their efforts till the legal abolition of vivisection was accomplished.

The annual balance-sheet showed an income of £415 14s. 9d. made up of subscriptions, donations, and legacies; after meeting the expenses of the year a balance had been carried to the Reserve Fund.

The SECRETARY also intimated the receipt of apologies from Glasgow, Ayr, Dumfries, Perth, Dundee, Aberdeen, Inverness, Brechin, Fife, and other districts.

The CHAIRMAN, in moving the adoption of the report, remarked that many things were said of vivisection, but after all the final term was that it was a sin. When the thing was deemed a sin there could be no excuse, no defence, no valid justification of it. Its sinful character was the deepest and strongest ground of protest, because to torture a sentient creature could never be right, never agreeable to conscience, and never reconcilable with an active moral sense. The Society had organized public opinion against that cruel medical fad. He had no wish to interfere with science or limit its pursuits, but opposition to vivisection could only cease when higher virtues were abolished from the earth. There was a humane movement to advance the standard of right. The proof of advancing civilization was not growing comfort but growing discrimination. What was it they attacked? It was privileged cruelty. The reform they desired was that cruelty of every kind should be made a penal offence.

That was at once logical, humane, and Christian. Mr. Baird went on to show how, while other kinds of cruelty were punished by law, vivisection was not interfered with in any way in spite of the tortures which, he said, were inflicted upon dumb creatures in the course of scientific experiments. The more a doctor believed in and was guided by vivisection, the less trustworthy was he as a family physician. The man had no sense of proportion who depended upon vivisection and allowed doubtful good to outweigh incalculable evil. In conclusion Mr. Baird urged that the logical outcome of animal vivisection was human vivisection. (Applause.)

Mr. W. C. MAUGHAN, J.P., seconded the motion. He said the Glasgow Branch had been started by the Edinburgh Executive of the Scottish Society and was doing well. The tortures of vivisection were terrible, and it would require the graphic power of a modern Hogarth to depict the scenes that took place in scientific laboratories with the poor victims tied down and a crowd of eager students around.

Surgeon-General WATSON moved the following resolution:—"That the members and friends of this Society in Annual Meeting assembled desire to place on record their conviction that further experience and wider knowledge of the evidence with regard to vivisection indubitably show that from any point of view the practice is unjustifiable and ought to be prohibited." He thought it was a doubtful point when scientists told them that vivisection was to a certain extent promoting the progress of science and ensuring longer life. They told them that man was better than a beast; but they ought to remember also that the soul was better than the body and they should consider whether they were to do right, not whether they could prolong life for a few hours or a few months. He spoke from personal experience of medical study in Paris, as to the wickedness and cruelty of French doctors to their patients, and he attributed this to the fact that for the last 100 years Paris was the seat and centre of vivisection. He never, although he had studied medicine in the Scottish universities, saw vivisection practised until he went to Paris, and he came back with a horror of it. (Applause.)

Dr. DAVIS formally seconded the resolution, which was unanimously adopted.

On the motion of the Rev. W. ALLAN, M.A., seconded by Mr. J. PRINGLE, the office-bearers were re-elected for the ensuing year.

General GRANT moved a vote of thanks to the speakers, Colonel PENNYFATHER to the Committee, and W. C. MAUGHAN, Esq., to the Chairman, after which the proceedings closed, the Chairman pronouncing the Benediction.

MEETING AT MAYFIELD ROAD.

On Tuesday, the 8th of February, a meeting was held at Mayfield Road, Edinburgh. Colonel Waterston presided, and there was a large attendance. The Rev. William Allan, M.A., delivered a very interesting address on the present position of the anti-vivisection movement. General Grant, ex-Councillor Western, and others also addressed the meeting, and a number of questions were put and answered. Literature also was distributed.

MEETING IN GLASGOW.

On Tuesday, the 1st February, the monthly prayer meeting was held in the Protestant Alliance Rooms, Argyll Arcade, Glasgow. Mr. C. Maughan, Esq., J.P., presided, and conducted the meeting.

MEETINGS AT DUMFRIES.

On Monday evening, the 14th February, Colonel Waterston addressed a well-attended meeting in Waterloo Place Chapel, Dumfries. The Rev. James Strachan, M.A., presided.

On Tuesday, the 15th February, a conference was held in the Town Hall. Provost Glover was to have presided, but had been suddenly called elsewhere, and Bailie Dinwiddie, the senior magistrate, took the chair in his place. The Rev. John Baird, president of the Scottish Society, Edinburgh, delivered a most powerful and instructive address on the present position of the Anti-vivisection Movement. Ex-Provost Shortridge and the Rev. James Strachan, M.A., also spoke with good effect.

Opportunity was taken of this visit for a wide circulation of literature, and Col. Waterston, the secretary, called on several parties to interest them in the subject.

FOREIGN INTELLIGENCE.

NICE.

DEATH OF ANOTHER PASTEUR PATIENT.

Il Secolo, of Milan, of January 31st, reports the death of a lady named Cunac, an inhabitant of St. Servin, from hydrophobia, although she had been submitted to the Pasteurian treatment. She was bitten three months previously by a rabid cat. Although the wound was slight, she went to Paris, and was, it is stated, for about two months under the Pasteurian treatment there. Her health being to all appearances perfectly good. She had even forgotten her wound, and did not suffer the least inconvenience; but on the 29th of January the unfortunate lady was seized by convulsions, which a medical man recognized as the symptoms of hydrophobia, and twenty-four hours afterwards she expired.

UNITED STATES.

THE DISSECTION OF CATS IN SCHOOLS.

(FROM THE "NEW YORK WORLD," JANUARY 23RD.)

MATTEAWAN, N.Y., January 22nd.—The Board of Education has formally disapproved of the dissection of recently-killed cats in schools over which it has jurisdiction, and an order to that effect has been properly issued.

Miss Frances Nearing did dissect a cat. There is not the slightest doubt about it. She is one of the teachers of the Union Free School. It was in the physiology class that Miss Nearing exhibited the organs of the cat and explained the different uses for which they were intended. It was a useful object lesson. The children learned more about physiology than they had ever known and, besides, some of them had a "beautiful time."

Of course they went home and told their parents all about it. And the parents for the most part were filled with horror that such a thing could take place in an enlightened and refined community. The fathers and mothers descended upon President Vosburg and other members of the Board, and told him it was the most awful thing they had ever heard of.

Gurden R. Miller, the principal of the school, stoutly defended Miss Nearing. He talked about the educational and scientific value of dissection, and won many supporters. But the majority of parents was against him.

The Board of Education was in a quandary. The members didn't care to oppose public opinion on one hand, and on the other they feared to be placed in the position of opposing modern educational methods. So President Vosburg wrote to Charles R. Skinner, Superintendent of Public Instruction, about it. Superintendent Skinner answered promptly. He said:—

"If I feel constrained to offer any criticism it might be as to the advisability of dissection of animals before small children. While this method of teaching physiology is approved to a certain degree by modern educational authorities, the custom is not general in the high schools of the State.

"The subject is one entirely under the control of your Board of Education in establishing its course of study, and the methods adopted by the teacher in question may safely be approved in instruction to the higher classes of pupils. There is, however, no law which makes it obligatory on the part of any teacher to use this method in teaching any particular branch."

The Board of Education met last night to consider the important matter. Superintendent Skinner's letter was read, and then a resolution was introduced. There was a warm time in the Board. But the anti-dissectionists carried the day. This is the resolution adopted:—

"Whereas, the dissection of animals or the exhibition of dissected parts of animals in our public schools for the purposes of instruction in any branch of science is discredited by a large proportion of the inhabitants of this school district, and is considered by them as being more demoralizing than enlightening in its influence upon the children in attendance, and they insist that there are other and better methods by which children can be instructed in all the branches taught in our school, and it being evident that the public demands the discontinuance of methods which they consider non-conducive to the general welfare of the school,

"Resolved, that this Board of Education do hereby publicly express their disapproval of the dissection of animals in any part of

the public schools, which is from this date prohibited, and that a repetition of the offence will be considered sufficient ground for the instantaneous dismissal of the teacher."

An amendment was offered, but it was not carried.

The Board of Education thought the incident was closed, but it wasn't, for Principal Miller's resignation came along swiftly. The principal says he deems it inconsistent with his self-respect to submit to a public reproof, formulated before he had been consulted or given an opportunity for defence.

GERMANY.

We read in the *Thier-und Menschenfreund* that Frau Parlaghy's letter, of which we published a translation last month, has created quite a sensation in Berlin. It is true that it was for the most part a repetition of that which has been stated over and over again in these columns and elsewhere, but in reading it one realized more than ever vividly the distress which the horrors of vivisection must cause to a highly refined and sensitive artistic nature. Frau Parlaghy has received many letters of sympathy and encouragement, and one of them contained four lines in verse which may be rendered as follows:—

With brush and palette and thine art
Thou didst win the laurel crown;
Now thy noble woman's heart
Widens, deepens thy renown.

Frau Parlaghy had previously won the Emperor's prize for her work as an artist.

THE PREVENTION OF CRUELTY CONGRESS OF 1900.

We learn from the *Thier-und Menschenfreund* that the Berlin Branch of the World's League against Vivisection has sent to the Paris S.P.C.A. a protest against the exclusion of the subject of vivisection from the consideration of the Congress of 1900. To prevent misunderstanding the protest was written in French and was to the following effect:—

To the President of the Paris S.P.C.A.

The undersigned Berlin Branch of the World's League against Vivisection requests that the question of Vivisection be replaced on the list of subjects to be discussed at the International Congress arranged to be held in Paris in 1900. The reasons for this request are as follows:—

(a) The Society on which has been conferred the honour to make the necessary preparations for the Twelfth International Congress cannot by itself override the special resolution with regard to it, which was passed at the last Congress.

(b) The exclusion of the question of Vivisection would be a distinct step backwards, as it is one which has been the least discussed at previous Congresses and which yet calls most urgently for discussion and a proper understanding between the various societies. Apart from this, Vivisection is so evidently a form of cruelty to animals that it should as a matter of course appear on the programme of the Congress.

(c) The exclusion will probably cause a rupture among the societies and lead to a permanent division.

(d) Such a division will greatly weaken our cause.

(e) On the other hand there would be no compulsion upon those societies which do not take up the work against Vivisection, to attend the meetings at which the question would be discussed.

It is suggested that the societies interested should send a similar protest to Paris* or better still add their signatures to the protest sent from Berlin. Miss K. Deighton, of Cannstadt, the Secretary of the German Section of the World's League, is prepared to receive such signatures so that the protest may serve to express the general and united opinion.

Professor A. Szalkay has written to Paris stating that it is his duty as Secretary of the last Congress to say that the Paris Society has not the right to set aside the resolution passed then; and that in the case of the Society persisting in doing so he should feel compelled to enter into correspondence with either the St. Petersburg or the London Society, both of which had offered to undertake the arrangements for the thirteenth Congress.

We have received a letter from Dr. D. N. Banerjee, hon. correspondent of the society at Calcutta, in which he warmly protests against India being turned into a laboratory for a number of foreign experimentalists and inoculators.

* This has been already done from London.

Obituary.

THE COUNTESS OF CAMPERDOWN.

At the very beginning of the Anti-Vivisection movement in England, at the close of 1874, Lady Camperdown exerted herself enthusiastically to obtain signatures of weight for the memorial drafted by Miss Cobbe, and presented in January, 1875, to the Committee of the Jermyn Street Society. From that time she took the keenest interest in the cause, and when Miss Cobbe founded the Victoria Street Society she was one of the earliest to accept her invitation to become a member of the committee. For twenty-three years afterwards Lady Camperdown took her place at the board almost unflinching whenever she was occupying her house in Hill Street, and even when in the country she was constantly engaged in helping the work by correspondence, and especially by bringing to book the secretaries of hospitals, and exposing their accustomed quibbles concerning the vivisection practised "not in the Hospital," but in the adjoining Medical Schools. She was a decided advocate of total prohibition, and during her last illness (from heart disease) Miss Cobbe, in writing to her, forbore to mention the recent project of "Lesser Measures," lest it might cause her painful excitement. She read, however, Miss Cobbe's letter on the subject and Mr. Coleridge's reply in our columns, and immediately dictated to her daughter, Lady Abercromby, the following letter, the last words being in her own writing. She died four days later, to the grief of the many who knew and loved her, for her sweetness and tenderness of character, her excellent good sense, and her earnest piety to God and fidelity to her friends.

[COPY.]

"Weston House, Shipston-on-Stour,
" 1st Feb., 1898.

"DEAR MR. BELL,—As I am too ill to write myself I have asked my daughter to write this letter to express my deep regret at the resolution which has caused Miss Cobbe, the founder of our Anti-vivisection Society, to tender her resignation. I need scarcely say that if this resolution be carried I shall follow Miss Cobbe's example. (*Her own writing*) It is a heartbreak to so earnest an anti-vivisectionist as I am, and I little thought that such would be the ending of my connection with the Victoria Street Society. I am very ill.—Yours sincerely,

J. CAMPERDOWN.

"To E. Bell, Esq."

SIR JAMES STANSFELD, G.C.B.

By the death of Sir James Stansfeld, one who in his time had been a strenuous worker in many fields, has passed away. In his early days Sir James was the friend and helper of Italian patriots; later in life he won the battle of what was at one time deemed a forlorn hope by getting Parliament to decree the abolition of the C. D. Acts. For many years he had been associated with the Society, and oftentimes gave advice on parliamentary procedure, but took little active part in the movement. Nevertheless, his adhesion as a prominent public man and ex-Minister to our cause was valuable, and his death is much to be regretted.

MISS MARRIOTT, OF BRISTOL.

The Anti-Vivisection Cause could have had no more staunch supporter than Miss Hannah Marriott, who passed away at Woodburn House, Cotham Park, Bristol, on the 1st of February. Some months before Miss Marriott met with an accident which told upon her already-weakened constitution, she having long been a sufferer from asthma. She died after a short illness, the end being hastened by a weakness of the heart. The elder of two sisters who worked and used

their means for the same object, Miss Marriott had incessantly for many years done her utmost to ameliorate the lot of animals, devoting especial efforts to the opposition to vivisection. The Bristol Branch owed much, if not almost everything, to her and her sister, in the early days, though a number of energetic helpers have of late years joined in promoting its interests. In few places has a stronger or deeper impression been made in behalf of our cause than in Bristol, and in producing that impression Miss Marriott had taken a large share. Personally she was kindly and hospitable, while her benevolence was by no means limited to the cause of the animals. The remains of Miss Marriott, who was sixty-five years of age, were interred at the Friends' Burial Ground, Laurence Weston, on Saturday, the 5th ult.

THE HON. MRS. IVES.

The Hon. Mrs. Emma Ives, daughter of the third Lord Maynard, died at her villa, at Nice, in the spring of last year. She was an old subscriber and friend of the Society. Prevented by years and infirmity from taking any public part in the movement, among friends and relatives her earnest zeal and eloquence were deeply felt. She regarded vivisection as one of the very worst of crimes, and was often haunted by the doings at Alfort, of which she would sometimes speak with the deepest sorrow on the mornings when experiments took place. The sufferings of the dumb world, and of the prisoners, were never far from her remembrance until she passed away in perfect peace, aged eighty-four.

THE REV. CANON PERCY SMITH.

This enthusiastic and zealous supporter of our cause, expired at Bournemouth on the 28th of January. Canon Percy Smith, who was of Balliol College, Oxford, was ordained in 1849, and was subsequently Incumbent of Yorktown, Surrey, Vicar of Great Barton, Suffolk, and Chaplain of Christ Church, Cannes. He was made a Canon of Gibraltar in 1892. Canon Smith joined the Victoria Society six or seven years ago, since when he had been a subscribing as well as an honorary member. In 1896 he spoke at the annual meeting, and was ever ready to do his best for the cause.

THE REV. E. THEODORE HITCHENS.

The Rev. E. Theodore Hitchens, the minister of the Eccleston Square Congregational Church, Belgravia, died on Thursday, February 3rd, after a brief illness. Mr. Hitchens, who only succeeded his father, the late Dr. Hiles Hitchens, twelve months ago, contracted a chill a few days previously, which developed into pneumonia and pleurisy. He was trained for the ministry at Weston College, Plymouth, his first charge being at Torquay. He was a warm supporter of the Anti-Vivisection cause, for which he had several times spoken in public, and otherwise aided.

MISS PHŒBE BLYTH, OF EDINBURGH.

Miss Phœbe Blyth, a lady well known in Edinburgh in educational and other circles, died at her brother's house in Mansion House Road, Edinburgh, on Saturday morning, the 12th of February. Miss Blyth had, for the last nine years, been a member of the Edinburgh School Board, and taken an active part in having Edinburgh University opened to women students. She was also very active in other ways. She took part in the starting of the Scottish Society for the Suppression of Vivisection, and always took a warm interest in its work, and was ever ready to help it with her considerable influence.

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The object of the Society is to awaken the conscience of mankind to the iniquity of torturing animals for any purpose whatever; to draw public attention to the impossibility of any adequate protection from torture being afforded to animals under the present law; and so to lead the people of this country to call upon Parliament totally to suppress the practice of Vivisection.

Those who sympathise with this object are most earnestly entreated to afford the Society all the help in their power, by subscribing, and inducing others to subscribe, liberally to its funds; by obtaining signatures to Petitions to Parliament; and also by disseminating the publications of the Society, and especially its organ THE ZOOPHILIST, wherein the latest information respecting the Anti-vivisection agitation is to be found.

Member's Annual Subscription, 10s. Life Membership, £5.

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SPECIAL SUPPLEMENT TO THE ZOOPHILIST.

LONDON, MARCH 1, 1898.

THE NATIONAL ANTI-VIVISECTION SOCIETY.

THE SPECIAL COUNCIL MEETING.

THE RESOLUTION FOR "LESSER MEASURES" PASSED.

The special meeting of the Council to consider the resolution sanctioning the policy of Parliamentary effort for Lesser Measures than the Total Prohibition of Vivisection, was held at the Westminster Palace Hotel, on the 9th February. There was a very full attendance of delegates, and, in view of the great interest involved in this question for all supporters of the movement, it is thought advisable to give the following full report of the proceedings. The following is a list of those who signed their names as being present :—

Lady Abinger, Right Hon. Evelyn Ashley, Bishop Barry, Ernest Bell, Esq., M.A., Col. S. M. Benson, Mrs. Benson, Miss Rhoda Broughton, Miss Olive S. Bryant, A. A. Beale, Esq., M.B., Miss K. H. Bradley, Lord Cardross, F. A. Channing, Esq., M.P., J. Passmore Edwards, Esq., Rev. E. Fischer, Hon. Mrs. Arthur Henniker, Rev. G. F. Holden, Mrs. E. M. James, Mrs. Leycester, Miss Marston, Miss S. S. Monro, J. G. Swift McNeil, Esq., Q.C., M.P., Mrs. Nicholetts, Lady Pender, F. E. Pirkis, Esq., R.N., F.R.G.S., Mrs. F. E. Pirkis, Edmund Parker, Esq., Lester Reed, Esq., F.C.S., Miss Ellen E. Rees, Mrs. Roscoe, George W. E. Russell, Esq., Sir Barrington Simeon, M.P., Mark Thornhill, Esq., Dep. Surg. Gen. Thornton, C.B., Mrs. Robie Uniacke, Mrs. Arthur J. Walter. *Delegates from Affiliated Societies and Branches*:—Bristol and West of England, Captain B. B. Nicholetts, Mrs. Clayton; Bolton, Rev. C. J. Street, Mrs. Arthur Greg; Buxton, Miss M. E. Jackson; Church A.V. League, Rev. Aug. Jackson, Miss A. L. Woodward; Friends' Association, Thos. W. Marsh, Esq., Mrs. Lester Reed; Ipswich, Mrs. Luther Holden; Liverpool, Rev. Theodore A. Howard; Macclesfield, Miss Mary I. Booth, Miss M. Brocklehurst; Manchester, Herbert Phillips, Esq., J.P.; Nottingham, Mrs. Dowson; Oxford, Rev. Henry M. Fletcher, George Parker, Esq.; Reading, Rev. A. H. Cunningham, Rev. Joseph Stratton; South London, Miss E. Watts Phillips, Miss M. Bisdee; Scottish A.V. Society, Rev. John Baird, Col. Waterston, J.P.

The Right Rev. Bishop Barry having been voted into the chair, the Secretary (Mr. BENJAMIN BRYAN) read the notice convening the meeting.

The Hon. STEPHEN COLERIDGE (Hon. Secretary) said he had received a large number of letters from supporters of the Society, which it would take till midnight to read, and he proposed to merely read a list of the names of those who had written supporting the resolution, and those opposing it. He proposed to make an exception in regard to a letter written by Miss Cobbe, which she desired should be read to the Council. The following had written opposing the resolution :—Mr. and Mrs. Wm. Adlam, V.P., Mrs. Mona Caird, Rev. Sir George W. Cox, Mrs. Lloyd Price, Lady Mount Temple, V.P., Mr. Serjeant Spinks. The following had written expressing regret that they were unable to attend to support the resolution :—Miss Austen (Hon. Sec. East Kent Branch), Mrs. H. Barnes

(Hon. Sec. North Devon Branch), Miss Mabel Collins, Mr. Charles J. Weld Blundell, V.P., Sir Theodore Fry, Bishop Ingham, V.P., Hon. Mrs. Deane Morgan, Lord Leigh, V.P., Lord Coleridge, V.P., Mrs. Charlotte Moody, Bishop Mitchinson, Mr. Justin McCarthy, M.P., Mr. and Mrs. Rathbone, Georgiana Countess of Seafeld, Lord Strafford, V.P., The Bishop of Southwell, V.P., Canon Wilberforce, V.P., Mr. William Watson, Rev. Albert Lee, Mr. Lawson Tait, F.R.C.S.

Mr. BRYAN read the following communication from Miss Frances Power Cobbe :—

TO THE CHAIRMAN OF THE COUNCIL OF THE NATIONAL ANTI-VIVISECTION SOCIETY.

SIR (OR MY LORD),—My advanced age rendering me unfit to attend the meeting on the 9th inst., I beg permission to state my reasons for opposing the motion on the agenda of the day. I can do this in two sentences.

1. The resolution to adopt Lesser Measures will infallibly be understood to involve now, and will practically lead hereafter to the abandonment of our aim of the Total Prohibition of Vivisection.
2. No benefit to the animals can come from such measures, because no regulation of experiments,—such as has been suggested by Mr. Coleridge in his letter to the *Zoophilist*, nor any other on similar lines,—has the remotest chance of being observed by the Vivisectors unless enforced by the rigid inspection of a score of experts, who must not themselves be vivisectors or friends of vivisectors; and such experts are not to be found in England or anywhere else.

The cardinal fact on which the whole controversy hinges is overlooked by the sanguine originators and supporters of these projects. Vivisection is not a useful resource of science, liable to abuses which can be corrected, but a *Method of Research*, which is all use and all abuse, and which must either be stopped *en bloc* as a method, or sanctioned as a method. To imagine that the wit of man can convert it into a *humane* method, is to let our wishes run away with our common sense.

That the proposed amendments of the Act of 1876, if we obtain them, will not serve to lessen the suffering of the animals by a jot, I am profoundly convinced. They will only prove a *quietus* to the public conscience and a direful hindrance to all future efforts to awaken it again.

I make now one last appeal. It is proposed to alter the "programme" (I will not call it "principle," as it appears that word gives offence) under which the single society I founded has multiplied to eighty Anti-vivisection Societies in Europe and America. In setting that programme aside, the Council will be rejecting the

earnest advice of those who might, without presumption, suppose themselves best qualified to form a judgment, having had longest experience. I speak of the surviving founders of the society, all of whom, without concert together, are unanimously opposed to the new departure. I speak also of those who, in Manchester, Edinburgh, Bristol, and other places, have been working zealously for the cause for years before many of those who will record their votes on this occasion took the smallest interest in the subject. I speak of those who worked under the guidance of our wise old leaders, Lord Shaftesbury, Lord Mount Temple, Cardinal Manning, Bishop Harold Browne, and all the other good men gone to their rest, who taught us our policy and fixed our "programme." I speak, lastly, of some whose natural and happy pursuits were abandoned to work for this cause, and whose lives for twenty years have been darkened by the dreadful subject, never wholly absent from their thoughts. Let our younger and newer allies, recruits in the service, who have perhaps attended a dozen meetings of committees and forgotten the whole subject in the intervals and public men who are too busy to give the question more than transitory attention, let them, if they think it befitting, out-vote us, *Veterans*, who have borne the burden of the long battle and must soon lay down our arms. We will wish them all success and part from them with every kind feeling, recognizing heartily their good intentions. But we will neither deceive ourselves with vain hopes of eliminating cruelty from licensed Vivisection, nor help to deceive our countrymen by delusive legislation.

FRANCES POWER COBBE.

Hengwrt, Dolgelly, February 4th, 1898.

The CHAIRMAN—Ladies and gentlemen. Before calling on Mr. Bell to move the first resolution which is on the agenda paper, I should like, as Chairman of this meeting, to say a few words on the very important and critical position in which the Society stands. What is before us is a matter—I will not say of principle, but certainly a cardinal matter of policy. It is therefore, to my mind, of essential importance that it should be thoroughly discussed here at this Council, not so much on the ground of details, as on the ground of broad generality. I understand that the function of the Council is to determine the general policy of the Society; the function of the Executive Committee is to carry out that policy so determined upon in detail; and I think, therefore, that the one question which is before us to-day is the accepting or the negating of the resolution that will be put before the meeting, without committing ourselves to any special methods of carrying out the policy which it suggests. I hope we shall discuss it thoroughly and come to a decision upon it; but I do also hope that, when the matter has been fought out, those who happen to find themselves in the minority, on whichever side that minority may be, will see their duty of acquiescing in the decision to which the majority of the Council have come, and avoiding, as far as possible, any split in the Society, or any public conflict, which will give occasion of rejoicing to the enemy and injure the cause we all have at heart. In this matter, as in so many others, it is of importance to avoid what I may call the schismatic spirit—the spirit which separates men from a movement simply because there are certain details of its policy of which they cannot approve. I trust that, whatever is the issue, whatever may be our decision to-day, we shall bow to the authority of the Council, and that we shall endeavour still to work on with the Society, with all our hearts, in the cause which, I think I may say, we all equally hold dear. (Applause.) Those, ladies and gentlemen, are the two thoughts I venture to submit to you—that we should to-day discuss this matter as a matter of great general policy, and that, whatever may be the decision come to upon the matter, we shall endeavour to recommend it to the various branches of our Society, that we may hold together and still go on, and I trust go on successfully, in the cause we have in hand. I am very glad indeed that an exception has been made in favour of reading the interesting letter from Miss Cobbe. I do not know that it adds much to letters which have been already in our hands; but we must look to her as having had a very important part in the founding of the Society long ago, and, whether we agree with her opinion or not, we must give it the most respectful and earnest consideration. (Applause.)

Mr. ERNEST BELL—I am sorry that it should fall to my lot to have to propose the resolution which has been the cause of so much difference of opinion in our Society, but as Chairman of the Committee I fear it is one of my duties to do so. I think a great deal more importance has been attached to the matter than it really deserves. There seems to be much misunderstanding and also a good deal of false sentiment afloat. We have heard a great deal about "hauling down our colours," "lowering our standard," "departing from our principles," and so on; expressions which perhaps are fair enough in argument, but seem to have no basis of fact at the back of them. No one has any intention of hauling down any flag at all. One lady says that to introduce the proposed Bill into Parliament will be "practically to give up the battle altogether" and that this step "seems to involve the whole future of the cause." I have not so low an opinion of all the anti-vivisectionists outside this room as to think they will give up the cause on account of anything we may decide here to-day. When Miss Cobbe says that such a Bill must "inevitably constitute a tacit renunciation of our true object" and that "it will infallibly be so understood both by friends and enemies here and in America," I do not at all agree that there is anything "inevitable" or "infallible" about it. To use such words is merely to assume the whole point at issue. All this resolution asks is that we shall not for ever be tied down to ask for what we all admit—Miss Cobbe included—cannot possibly be attained during our lives. If we were starting afresh of course we should demand nothing less than a law for total abolition, but the case is different now. We are living under a restrictive law. When our Hon. Secretary writes to the *Times* to pull up Dr. Starling for vivisection without anæsthetics or when he complains to the Home Office that some physiologist has been experimenting without the proper licence, he is not working for total abolition, he is working to enforce the present restrictive law. He recognizes it, and we all approve his action. If we saw any clause or sentence in the Act capable of two interpretations should we not strain every nerve to secure the interpretation most favourable to the animals and think we were doing quite right? But I do not see how this differs from trying to tighten up the present Act or add any new clause to ensure better treatment of the animals. We have been told that nothing we can do will be of any avail. I cannot agree to this. But the proper time to discuss the clauses of a Bill is when we have a draft before us. By all means let us have full discussion then, clause by clause. We have no wish to do anything foolish. At present we ask only for permission to draw up such a Bill. That there can be such pronounced differences of opinion seems to be because the opinions are based mainly on the things that may or may not happen in the future, if either course is adopted. In reality the only thing we know with certainty about the future is that it will pretty certainly be a good deal different from what any of us expect. Mr. Coleridge's view seems to me to have the advantage because it has the support of the only available facts we have, namely our past experience. For twenty years we have plodded on with the result that we have made absolutely no single step in advance, while the enemy have simply got everything they wanted. When the Act was first passed there were twenty-three vivisectioners, now there are about 230, and the experiments have increased in the same proportion. To show how satisfied the vivisectioners are with the present Act I may say that in criticising the Parliamentary Return for 1896, the *British Medical Journal* said: "The report of the Inspector for last year has just been issued, and shows that the Act under which the Return is made does not perhaps check scientific investigation so much as might be feared." Then, in the following year, the same paper wrote, "To-day, though we have a Vivisection Act in operation, but few physiologists have cause to grumble on this score, for the Act has been administered by successive Home Secretaries with wisdom and fairness." Again, analogy is not argument, though it is often mistaken for it, and Miss Cobbe's analogy about the slaves does not seem to be a true one. Cruelty to animals has not been abolished, as she seems to imply, in at all the same way as slavery has. A law was passed protecting a certain class of animals, namely the domestic ones, and the law even is carried out in a very partial manner. Miss Cobbe's analogy

would have been truer had she supposed that "half castes" had been protected from slavery by law while all other natives had continued in slavery; that then some special licences had been granted to put back the protected class into the position of the others. I think in such circumstances we *should* all welcome any measures which might bring them some relief before slavery was wholly abolished. This would be a parallel of our case. While we are surrounded by the horrid barbarities of the slaughter-house, the cattle ships, sport, the wearing of furs and feathers, it does not seem to me reasonable or practical to say we must jump to perfection in one branch of the subject and let all the rest wait for generations before they are attended to. I do not think there is a chance of vivisection being *totally* abolished until the public mind has been changed with regard to its whole treatment of animals. If I, too, might indulge in prophecy, I should say I did not in the least agree in the gloomy forebodings with which we are threatened. It seems to me that if the proposed Bill should come to nothing, as is quite possible, it will at any rate be a great gain and a means of education to have a measure before Parliament which will have the sympathy of a number of members. Those who support Lesser Measures now will, in a few years, be ready to go further, while those who scoff at us as faddists will be prepared in course of time to go at any rate part of the way with us. It is a pity that the question of money has been mentioned in this matter, but as it has been considered that our votes might be affected by it, I may be excused for saying that I think we may be sure that if after recent events any legacies should be given to the Society they would be surrounded by such conditions as would tie the hands of the Committee for ever. A gift, to be a real gift, should be perfectly free, and I think the Society is better without gifts hampered by all sorts of conditions. There is one other reason. No one can work at his best except in his own way. Mr. Coleridge has shown us that he is prepared to give, without stint, his time and his abilities to the Society. I think the least we can do, unless we are quite certain that he is wrong—and who can be certain when there are such differences of opinion amongst us—the least we can do is to allow him a free hand. I have pleasure in proposing the following resolution:—

"The Council affirm that, while the demand for the total abolition of vivisection will ever remain the ultimate object of the National Anti-Vivisection Society, the Society is not thereby precluded from making efforts in Parliament for Lesser Measures, having for their object the saving of animals from scientific torture."

MR. G. W. E. RUSSELL, M.P.—My Lord, I have been asked to second this resolution. It would be much more convenient, I think, if I might be allowed to formally second the resolution now and make my speech later on.

THE HON. STEPHEN COLERIDGE—I shall be very glad to second it myself. Perhaps as the father of this suggestion I ought to say a few words in its favour. First of all I wish to say a few words in regard to Miss Cobbe's letter that you have heard read. She alludes to us—I suppose it is us—as the "younger and newer allies, recruits in the service, who have perhaps attended a dozen meetings of committees and forgotten the whole subject in the intervals." Whether or not that alludes to me I do not know. I was elected to this committee in 1883. I sat on the committee with Lord Shaftesbury, Cardinal Manning, and many of those persons to whom Miss Cobbe alludes as having gone to their rest. I also wish to say as to that part of her letter in which she alluded to the "real old Wilberforce," saying that she was quite certain that if he was alive he would support the view she takes, that Canon Wilberforce, the grandson of "the real old Wilberforce" has told me that in his opinion his grandfather would have supported very strongly measures for the amelioration of the condition of the slaves—such as the abolition of flogging and preventing the separation of slave parents and their children in the slave market and so on, while none the less would he have kept in view the total abolition of the slave trade and still have hoped to get that eventually. I think that when it comes to decide as to what the opinion of the great Wilberforce who is dead would have been in this crisis we have as much right to take the

opinion of the grandson as that of Miss Cobbe. (Hear, hear.) Now I want to take these two points that Miss Cobbe begins with. The first is "the resolution to adopt Lesser Measures will infallibly be understood to involve now, and will practically lead hereafter to the abandonment of our aim of the Total Prohibition of Vivisection." My answer to that is a very plain and clear one. I point to the resolution before the meeting which begins with the words "the Council affirm that while the demand for the total abolition of vivisection will ever remain the ultimate object of the National Anti-Vivisection Society." Words mean what they do mean and those words mean that we are for the total abolition of vivisection. (Applause.) Therefore I need not deal with that any further. Then Miss Cobbe's second point comes to this: she prophesies that even if we succeeded in getting some regulating measures passed they would be evaded by the vivisectors. Well, I will accept that. Suppose they are evaded; the evasion of a law is no valid reason for not passing that law. All laws for the benefit of humanity are evaded. The laws against cruelty to children are evaded, but that is not an argument against making such laws, and similarly Miss Cobbe's prophesies here are no argument against passing laws for the benefit of animals. If we get the laws passed it is our business to catch the people who break those laws if we can, and the third portion of our scheme is to enable us to appoint our own duly qualified inspectors to go into these places and see what is going on. (Applause.) I am convinced that if the vivisectors know that at any minute the door of the laboratory may be thrown open and in may come Mr. Stephen Coleridge or Dr. Berdoe there will not be so much cruelty going on as goes on now, and I say that if we stop any cruelty we have done some good. (Applause.) Now I wish just to say one word with regard to the question of money. I wish it to be clearly understood that we have not introduced this question of money, but it has been introduced in our faces and we must attend to it. We have been told that we shall lose £40,000, or some amazing sum, if we adopt what are called these Lesser Measures. My answer to this is I do not think we ought to take any notice of legacies until they have passed the Probate Court and been paid in. It is quite clear that legatees very easily change their minds, and, therefore, we ought not to take any notice until the money is paid over. But I want just to read you a letter from a lady who wrote to me this morning. She does not want her name mentioned, but this is the sort of thing that I hope will happen all over England. She writes: "Next to Miss Cobbe I was the first to work for the Anti-vivisection cause, and in a few days I will send you £100 to help on the good work you are undertaking." I hope I shall get plenty of letters like that. I believe I shall. I believe that eventually our policy will produce money and that success can only be got by going on the reasonable course. Now I want to say one other word about the claim of our opponents that these measures I propose militate against total abolition. I say they do not. If you go to Parliament now and say "Our position is this: we want you to come and help us to put down torture; at present we do not ask you to forbid a vivisector to vivisection an animal with anæsthetics, while you leave the slaughterman to kill animals without anæsthetics. We ask you simply to come and help us to stop torture—all torture whatsoever." I believe there are a large number of humane people in Parliament who will say: "Certainly we are with you when you ask us to put down torture and certainly we will help you." But then you say having passed these measures none the less the torture will go on. Granted. But then we can go to Parliament and say: "Now Parliament intended to put down torture; it passed Acts for that purpose. Parliament is now being defied by these men; now let us stop it altogether because it is clear now that you cannot abolish torture in connection with vivisection unless you abolish vivisection altogether." (Applause.) Ladies and gentlemen, I do not want to detain you at any length, but those in brief are some of the considerations that have led me to put this resolution before the committee, and I am glad to say the committee so far are supporting me—and after all the Executive Committee are elected by the council by ballot—I think that the Council should support the committee

elected last year unless they see very grave reasons for not doing so. The committee that this Council elected has, by a very large majority, supported me in this suggestion, and I hope the Council will not throw the whole thing back and refuse to endorse the action of its own committee. (Applause.)

The CHAIRMAN—The motion, having been proposed and seconded, is now before the meeting for discussion.

Miss WOODWARD (representing the Church League) moved an amendment to insert in the last line of the resolution after the word "object" the words, "the doing away of the secrecy of the laboratories." She said:—The feeling of the League which has sent me and one other here to-day to represent them here is that if the Lesser Measures take the form of, for instance, making all vivisection without anæsthetics illegal, and yet do not ensure thorough publicity, it will be injurious to the animals for this reason, that so long as vivisection can be performed in secret places every provision, however wise or good, will be certain to be utterly ignored by the vivisectioners. But they will make capital out of it in this connection: they will assert, and the public will be ready to believe them, that no kind of torture—no vivisection without anæsthetics—can possibly take place, on the ground that such a thing would be wholly illegal; whereas if once real publicity were obtained—more thorough publicity than that of allowing visits by inspectors appointed by this Society, a publicity which would admit all magistrates and Members of Parliament of either House—we believe that the total abolition of vivisection would follow with very little agitation—it would come almost by itself. Once you could drag in Members of Parliament to see for themselves what is really going on, they would require very little persuasion to grant us all we demanded. Therefore, if total prohibition is at present impossible, we would ask that the Lesser Measures that you propose should only consist of throwing in as far as we may a flood of light upon the laboratories, so that the very hideousness of the thing once being known the people of England may know how to deal with it. There has been an instance of another social warfare in America which illustrates that. The people, who were very strong about totally suppressing the sale of alcoholic liquors, failed to pass a law closing public-houses, but they succeeded in passing a measure providing that all the public-houses should have glass fronts, so that nothing could go on there unknown to the public. In this way they very much diminished the amount of drunkenness. So we would fain ask that metaphorically glass doors should be provided for the laboratories, so that the people of England may see what goes on in them, and then we believe that total abolition will swiftly follow. (Applause.)

The Rev. AUGUSTUS JACKSON—I have much pleasure in seconding the amendment which Miss Woodward has just moved. I consider publicity is the great thing we require in order to carry out the views we all have so much at heart. Every year I paste the Society's pictures in my church porch. I have a kind of anti-vivisection gallery there, and I preach a sermon and tell the people to look at these pictures, and I am very careful to be near this gallery at the time the people are there. The remarks I generally hear are something to this effect: "We do not believe it;" "It cannot be true;" "It is utterly impossible." Now, I am speaking of my own little parish. I am blessed with a churchwarden who is a magistrate and who bears the honoured name of Fergusson, a grandson of the celebrated surgeon. Now, if he had the right as a magistrate to go and enter one of these vivisection places and report to us and to his people what he had seen, I think that would be a complete answer to all the doubts which have been thrown on the statements which our Society makes concerning vivisection. Therefore, I have great pleasure, from my own experience, in saying that publicity is the great thing which we require, so as to enable our friends, who have seats upon the Bench of Magistrates for instance, and, I might almost say, members of Boards of Guardians, to go and see for themselves what is going on in these places, and then report to those persons who are interested in the question. I have very great pleasure in seconding the amendment.

The Rev. JOHN BAIRD—The amendment that has been

submitted is not an amendment, I take it, in the proper sense of the word. I am extremely disappointed at the course which the discussion has taken, inasmuch as a proper amendment, in my opinion, has not been submitted, and I exceedingly regret that it falls to my part to submit one. I regret it because I happen to be suffering from a considerable loss of voice, but in the circumstances I certainly have no hesitation whatever in rising to propose an amendment, not of the character that has been indicated, but an amendment of a simple and absolute character, namely, "That the motion submitted by Mr. Bell be not adopted."

The CHAIRMAN—I am sorry to say that I cannot accept that as an amendment. If you will allow me to say so it is simply a negating of the original motion. But any member of the Council can give notice that in the event of the amendment now before the Council being rejected and the original motion remaining, or in the event of the amendment being carried and becoming a substantive motion, then he will propose another amendment. We can only have one amendment at a time.

Mr. BAIRD—Then, though I speak on the original motion, I presume I have the full right to say all I intended to say?

The CHAIRMAN—Certainly.

Mr. BAIRD—Then I will just say that while I differ entirely from Mr. Bell and his seconder Mr. Coleridge, I quite appreciate the sympathies that have led them to adopt their present course of procedure. I believe they are quite at one with us in the matter of the uselessness and the evil of vivisection, and I for one should not in any way be disposed to doubt or challenge their integrity or their earnestness in this matter. The great point is that we differ not on a matter of principle but substantially on a matter of policy. I listened very carefully to the speech which Mr. Bell delivered, but it seems to me that although it contained a good many points it avoided the principal matter under discussion from first to last. The question before us does not raise the point as to the desirability of the various proposals that are made in reference to anæsthetics, in reference to curare, and other things, but the question that is raised before us is this—the judiciousness, the expediency, of the societies as such committing themselves to legislation in the direction not of total abolition but of lesser measures. I do not think that a word fell from Mr. Bell in the course of his speech demonstrating to us that by promoting legislation for lesser measures the societies would not in any way be compromised. Now that is the great point upon which a difference of judgment occurs. Then in regard to Mr. Coleridge's speech it was essentially based upon an entirely sanguine view of the situation. (Mr. Coleridge: "Hear, hear.") He practically said or led us all to expect that the Bill will certainly pass, and that the Bill will do an immense amount of good. Now if the Bill were passed and effectively administered I have no hesitation in saying a great deal of good would be done; but that is the incredible assumption. The question is raised whether it is a Bill that ought to be introduced by the societies or whether it does not more appropriately belong not to us, in view of our position, but to some private member of Parliament. That was not a point with which Mr. Coleridge dealt. Then he said we are certain to get this Bill. Well, upon that matter I confess I differ very decidedly from him—very decidedly indeed. Does Mr. Coleridge mean to tell us that the Victor Horsley school will for one moment submit to legislation requiring chloroform to be administered to every vivisected subject; or does he mean to tell us that Michael Foster and those associated with him will at all assent to a Bill of this restrictive character? My view is that there is quite as much chance for a Bill for the total suppression of vivisection being passed in the House of Commons as there is of any Bill being passed of the character that has been indicated. Then, consider the very serious aspect that matters would assume if this proposed Bill of ours were to be cast out. What would be the position of the societies? It would be said that they had to a certain degree taken the position of acquiescing for the time being in vivisection as inevitable; that they had practically for the time being recognized that there was no use of further contending for its abolition. I confess that I feel it becomes us as members of these societies to be very careful about putting ourselves in a position of that

sort. The moral damage to the anti-vivisection cause in this country, and the moral damage to the anti-vivisection cause in other countries, will be immense. We must look at this whole matter not merely from the point of view of the British Islands, but we must look upon it in an international light. Those who contend against vivisection in France and in Germany, and in Austria, and in America, what will they think of the anti-vivisection societies of humanitarian England, at this time of day, actually consenting to the introduction into Parliament of a Bill which is practically a compromise with vivisection? I trust you will pardon the very imperfect way in which I have set forth these sentiments. I do most earnestly trust that we may be saved from to-day placing ourselves in an attitude that will expose our societies to the very gravest misconception.

Dr. BEALE—It is with very great pleasure that I stand here to support the resolution that is put before the meeting by Mr. Stephen Coleridge. It seems to me that this resolution is entirely in accordance with the spirit of progress and evolution, and I think that if there be any misunderstanding at all it is on the part of those who would oppose this resolution; because, as it occurs to me, it is one of the steps which have to be adopted in the total abolition of vivisection. As a medical man I know the dreadful opposition which occurs in my own profession to anti-vivisection, and I rather fancy, although I say it with all kindness, that there has been in the past on the part of this Society too much animus shown towards the vivisectioners. We sometimes forget—although I do not wish to excuse any one—that vivisectioners, after all, are men; they are not all horrible, low-minded creatures; and I think that the best way to approach them—and I say so as a medical man—is not to rail against the lower part of their nature but to appeal to the higher part of their nature. (Hear, hear.) It seems to me that to say that the object of this Society, namely, the abolition of vivisection, would be done away with by the taking up of Lesser Measures, is analogous to the argument that a man who tries to explain how the world was evolved shows himself to be entirely opposed to the existence of a Supreme Being. I am not saying whether I believe in a Supreme Being or not; but at the same time I believe that if we take this as one of the means that we are going to adopt for the total abolition of vivisection, then we shall look at it in a more kindly and a more rational spirit. Personally I have not much confidence in that class of mankind that is going about the world who are called, and some of them are proud enough to call themselves, idealists. I am not myself an idealist, although I have been through the idealistic state of mind. I think there is more going to be done by the man who takes things as they are; and, looking at life in that way, from more of a practical standard, our object is to find out what we have got to do. With regard to what has fallen from the last speaker, I do not think it matters much to us whether vivisection is totally abolished or not, but it does matter very much to us whether we have done our little bit towards that object. I do not see that we have to do at all with results of that sort; but, as I say, it does matter a great deal whether we do our duty. This resolution, again, from a scientific standpoint, is entirely in accordance with the laws of the universe. It is evolution. It is gaining the mount step by step, and the man who says I am going to sit still because I cannot at once abolish vivisection, is like he who will not go up the steps because he cannot reach the temple at the top by flying. I think, looking at it as a step towards the abolition of vivisection on the one hand, and a resolution in accordance with evolution on the other hand, we shall see that there can be no objection raised to the steps proposed to be taken.

Rev. T. A. HOWARD—My Lord, I suppose that at present I should not be in order in moving another amendment?

The CHAIRMAN—No. You can give notice that you will at the proper time submit such and such an amendment, and perhaps it would be well if you told us now what the amendment would be.

Rev. T. A. HOWARD—The amendment I wish to propose at the proper time is "That this Council affirms that the demand for the total abolition of vivisection ever remains the object of the National Anti-Vivisection Society." That is taken from the previous part of the resolution now before the meeting.

Sir B. SIMEON—As a matter of order, may I make a suggestion with regard to the amendment proposed by Miss Woodward. So far as I am concerned I could vote both for the resolution and for the amendment. If the mover and seconder of the resolution would consent to amend the resolution by adding the words of the amendment, it would clear the way for us.

Mr. STEPHEN COLERIDGE—As I understand Miss Woodward's amendment, it would read thus: "The Society is not thereby precluded from making efforts in Parliament for Lesser Measures having for their object the doing away of the secrecy of the laboratories." My objection to that is that my resolution already covers that; that is one of the Lesser Measures that I propose; and therefore this amendment if carried is a very subtle way of tying my resolution down to this one object and no other. I want to abolish curare, and several other things; this would confine me to this one object, and therefore I oppose it.

The CHAIRMAN—If it is the pleasure of the meeting now to vote upon the amendment, I will put it. The proposal reads thus: "To omit the last words of the resolution and to substitute the following words, 'The doing away with the secrecy of the laboratories.'"

The amendment was, on a show of hands, lost.

The CHAIRMAN—The original motion is now before the meeting, and it is open to any member to move a further amendment.

Rev. T. A. HOWARD—My Lord Bishop, I have great pleasure in proposing the following as an amendment:—"That this Council affirms that the demand for the total abolition of vivisection ever remains the object of the National Anti-Vivisection Society." I am taking the words from the first part of the resolution that is before the Council.

The CHAIRMAN—Taking it with one important change.

Rev. T. A. HOWARD—With a very important change—the most important change that can be introduced.

The CHAIRMAN—You propose to leave out the word "while" and the word "ultimate."

Rev. T. A. HOWARD—Yes, it makes a very sweeping change. I think, my lord, I must commence what I have to say with a personal explanation and apology to Mr. Coleridge. A week or two since I had the pleasure of seeing him, and I rather led him to believe that those who were connected with me in Liverpool saw eye to eye with the majority of the committee upon this subject. I took the matter back to my own committee, and we have thoroughly thrashed out the whole affair and I have come here to represent the Liverpool branch—it is only a newly formed branch, but it is a vigorous one, and growing in influence I hope. I have come here to say that we are opposed to this resolution *en bloc*, for two reasons, and they are very sound reasons, from our point of view at all events. The first is on moral grounds. We are convinced that the lesser can never be made to cover the greater, and if we simply go before Parliament, and before this country and before other countries as the representatives of this great society and say that we practically abandon—it will be taken by the outside public as being an abandonment of our principles; they will say to us at once "You have practically no ground to stand upon." This is the feeling that animates us in Liverpool. The Lancashire people pride themselves on being a practical people, and you may depend upon it that this decision has not been arrived at without strong expressions of opinion, but the united opinion that we ultimately arrived at, and that I have come here this afternoon to express is, that on moral and practical grounds the Liverpool branch totally disagrees with the resolution. I may say, so far as the latter point is concerned, having a knowledge of human nature, such as we claim to possess ourselves individually, we have no faith at all that, I was going to say, those ideas—if Mr. Coleridge will not think I am rude in putting it in that way—his really delightful ideas would ever be brought into a practical form. We cannot think, as sensible people, that the inspection of laboratories would prove anything more than a delusion and a snare. We cannot understand for a moment—we are not children, we are men and women, and practical men and women, and we cannot think for a moment that it

would be possible to enforce the suggestions that Mr. Coleridge is so earnestly endeavouring to bring about. At the same time we feel that Mr. Coleridge and those of the Council and the committee who sympathise with him deserve our utmost respect and sympathy for the way in which they are trying to do something. We are all animated by the same desire, but we hold firmly to the great principle of the total suppression of Vivisection as "an abominable sin," and we think that we shall have just as much chance of success in going before Parliament for the larger measure as we should have in going for the smaller. Before I sit down, may I say this on behalf of the Society I represent. Our feeling is so strong upon this matter that we should be prepared to sever—(oh, oh)—yes, even at the risk of bringing in what has been called this afternoon "the severance idea." We shall be prepared to "cancel" our affiliation clause with this Society, and to separate. (Oh, oh.) We are bound to do it—logically we cannot do anything else. That is our feeling. To show you what is thought of it by outsiders, I may tell you that the other day I was talking to a merchant in Liverpool who is opposed to us. It had somehow or other got wind that this meeting was to be held to-day, and this gentleman said to me, "Then, you are going in for lesser measures, are you—you are going to pull down your flag and you are going to be contented with lesser measures?"

Mr. GEORGE RUSSELL—My Lord Bishop, Ladies and Gentlemen, I was asked by Mr. Coleridge to take upon myself the responsible task of seconding this resolution, but I thought on the whole, considering that Mr. Coleridge had himself been personally responsible for it, it was perhaps better that he should speak with the authority which belongs to authorship, and that I should intervene at some later stage. Let me say, in the first place, with the greatest respect for the illustrious names referred to in Miss Cobbe's letter, that I think the name of Coleridge in connection with this matter is at least entitled to as much respect, not only in reference to the living generation, but to that most eminent man who honoured me with his friendship, and who was one of the strongest advocates of the rights of the lower animals,—I mean the father of my friend on my right. (Applause.) I am convinced that nobody in this room would imagine that in venturing to support my friend Mr. Coleridge as against the views of my friend Miss Cobbe I am for a single moment forgetting the great services which she has rendered to this great cause. I may claim, indeed, to have had the honour of being, at any rate on one occasion, a public champion of Miss Cobbe, when an unmannerly vivisectionist insulted her in public, and it became necessary for any gentleman who had the honour of her friendship, to strike at least a verbal blow in her defence. But, great as is my reverence for her character and for her work, I feel that there is an absolute responsibility upon every one of us to guide his vote and his voice to-day by respect not to authority but to considerations which, in our own conscience and judgment, seem to point out the best way of serving the interests of the lower animals. (Applause.) For my own part I frankly admit that I am one of those persons sarcastically glanced at by Miss Cobbe in her pastoral epistle, who have been rare and infrequent attendants at meetings of our committee. The very reason which has caused me to be a rare and infrequent attendant has been the growing sense of the totally hopeless nature of the effort in which we have been engaged. I am—and I speak, I believe, for a certain number of my colleagues—tired of doing nothing. With the best intentions in the world we have been unable to undo or neutralize or nullify the harmful effects of the Act passed twenty years ago. Reference has been made to the parallel case of the slave trade. I cannot help agreeing with the view of Canon Wilberforce as to what would have been the course pursued by the leaders of the emancipation movement. I cannot but believe that if it had been within the bounds of practicality to mitigate the horrors of the slave trade, apart altogether from the question of abolishing it entirely, they would have felt no hesitation in accepting instalments, whilst still working for total suppression. They would not have felt that they were "hauling down the flag." That is a well-known and time-honoured metaphor, but really it should not be allowed to govern the decisions of rational people. Let us take another case which is, I think, a parallel case. More than fifty years have now elapsed since the United Kingdom Alliance set

out for the "total and immediate abolition" of the liquor traffic. They had some of the best men in the world, the most energetic workers, and also some of the largest funds ever devoted to any public purpose in this country, and now, after fifty years of work, we know what the position is. I think those advocates for the total and immediate abolition of the liquor traffic would be only too glad to compound if they could get a chance of passing a Bill embodying "Lesser Measures" in reference to their own particular reform. I see a distinguished Irish colleague and friend of my own at the other end of the platform. I do not know whether he would agree with me, but I should recommend him in the cause with which he is prominently identified to take into favourable consideration a measure going as far in the direction of his ideas for Ireland as can be obtained, while never in the slightest giving up his claim to go the whole length and to secure the complete fulfilment of his desires when the opportunity arrives. For my own part—this is, I know, only a matter of opinion, but the opinion is founded on some experience of life and of the House of Commons—I believe at present it is admitted even by the warmest advocates for total prohibition that a Bill for the total prohibition of vivisection would have no chance whatever of passing its way through the House of Commons and through the House of Lords. If that is admitted surely we ought to think twice and three times before we decide not to endeavour to do something which will mitigate, at any rate, if only by an infinitesimal amount, the sufferings of these wretched creatures. Remember, that if we are anything, we are trustees here of the interests of the lower animals. Are we acting fairly towards them if, in the hope of some day, twenty or thirty or forty years hence, securing their complete deliverance, we refuse in the meantime to do what we can for the generation of animals now living and suffering these tortures? (Applause.) Of course Mr. Coleridge is too wise a draughtsman to formulate in his resolution every point that would be embodied in his Bill if it ever saw the light, but there are some things in the way of limitation and restriction which I think would commend themselves to a dispassionate view. In the first instance there is the total abolition of the repetition of a painful experiment for the purpose of instructing a class and giving them an object lesson upon a fact which is already known. Then there is a reform which has always suggested itself to my mind—that only single experiments should ever be permitted; I mean that there should be no general licence but a licence required for every one experiment, and then not issued except on a *prima facie* case being made out by competent scientific authorities, prepared to give their names, that there is some probability of a benefit accruing to the human race from the proposed experiment. That would at once wipe out that large class of painful experiments which have for their object not any benefit to the human race but the mere unlocking of some of the secrets of nature. Then, again, there is the abolition of that odious drug which destroys motion but increases sensation; and there are a number of other minor points which might be attended to. Most important perhaps of all is the point dealt with in that amendment which perished untimely—I mean the question of publicity. I hope that the lady who proposed that amendment is not under the misapprehension that when we voted against her we were opposed to the idea of securing publicity. It was only because, had that amendment been carried it would have restricted and limited the scope of the resolution proposed on behalf of the Committee. We quite agree that publicity probably is the most powerful of all the agents that could be brought to bear on behalf of our cause, but we do not want to be tied to that as the sole object which this Society is to pursue. Publicity is one of the methods that Mr. Coleridge himself would be prepared to lay the greatest stress upon as one of the most valuable means of modifying vivisection. Then the gentleman on my left (Mr. Howard) said that Mr. Coleridge was animated by too sanguine a spirit. I do not know whether that is so. My private communications have not led me to suppose that he is living in any fool's paradise about the matter. I do not know that he labours under the impression, which would certainly be a wrong one, that the measures he contemplates would pass without opposition. It is unfortunately the fact, as is known, I dare say, to a great many of you, that the accomplished and distinguished

politician who now leads the House of Commons is an enthusiastic advocate for vivisection, and it is not difficult to conceive that not even the mildest measures of repression will be at all certain of passing. But what better chance has a Bill for total abolition? There is surely ground for being a trifle more sanguine about the passing of measures merely to limit and safeguard the practice of vivisection than about the passing of a measure for total abolition. It is surely a mistake to refuse to have anything to do with the effort to pass lesser measure simply because we do not feel sanguine about the passing of a complete measure. We have tried for over twenty years for the bigger thing, and have failed. Let us now try and secure the smaller thing, and if we fail, then some other door must be open. Of course, the cause must never be abandoned, but it is no abandonment of the cause to seek its accomplishment step by step instead of at one bound. Somebody asked to-night would there be any chance of vivisectors themselves agreeing to the passage of these lesser measures? I suppose not. I frankly concede that. From what I know of the vivisectioning mind, I should be rather inclined to disagree, I must say, with our friend in the middle of the Hall (Mr. Beale). I am most strongly of his view that harm has been done to the cause by inconsiderate language applied to the whole of his great profession, but from the actual vivisector himself, the man who performs these horrors, even though it be under a mistaken sense of duty, I confess I should not from him expect any response to the pleadings of humanity. But I would remind you that happily we have not got to such a pass yet that the vivisectors have it all their own way, and even supposing they were opposed to these lesser measures, that would by no means involve that the measures would fail to pass in Parliament. They have representatives in Parliament, but I am not aware that they command anything like a preponderance, or even any considerable following. Then, an important point was made about the effect of this action upon foreign nations and our sympathizers on the Continent. There I take leave to disagree entirely with my reverend friend on my left (Mr. Baird). Assuming, just for the purpose of argument, that we were fortunate enough, or I might say providentially blessed enough, to secure the passage of such a Bill as Mr. Coleridge has in contemplation, I think it would be singularly welcome to our friends abroad. They would thank God and take courage. They would see that the movement is not so hopeless as they might at present conceive it to be, and that England had once again led the way in a practical humanitarian reform. (Applause.) Then there was a gentleman from Lancashire. He spoke of the practicality of the Lancashire mind. That everybody who knows Lancashire will admit, but I am not disposed to admit that Londoners are not equally practical, or that the complete and absolute outsider takes always a more sensible view of what is likely, and what is possible, than those who have for several years been at work upon the subject. Our friend said that his own branch was a recently formed one. That fact does not disentitle it to respect, but its opinion ought not to be held to be conclusive against the reasoned and deliberate opinions of gentlemen who, like my friend Mr. Coleridge, and those who have worked with him, have given years of labour to a cause which certainly no one would take up except from the sternest sense of duty. Then again, he said, if you pass a limiting Bill it would not be of any avail, because the limiting Act would be evaded. But suppose we passed an Act for complete abolition, are we sure that that would not be evaded? Is it not open to exactly the same objection? Supposing you could by Act of Parliament enact that from this day onwards there should be no vivisection, is it not certain that you would still have experiments done by stealth? Let me remind you that in the debate of 1883 Lord Playfair said, as an argument against our Bill, "You will create a criminal class among the highest professional men, in order to *evade an unjust law*." That was the argument which was used against the prohibition then—that you were likely to create a criminal class by forbidding men to do that which in the interests of science they thought it necessary to do. Even supposing you passed a perfectly sweeping measure, we still could not be sure about its not being evaded. The argument that a law may be evaded is no argument against doing what we can in the way of getting a law passed. The business of the State is to

detect evasion, and to punish it when detected. The conclusion of the whole matter, to my mind, is simply this, that having failed for the time being, as we must admit we have failed, to attain the chief object of our desire, we should not (to revert to our favourite image) "haul down the flag," but, without abating one jot of our principle, should, in the interests of the creatures who at the present moment have to suffer, take what Providence puts in our way in the nature of restrictive, ameliorative, and protective measures. (Applause.)

The Rt. Hon. EVELYN ASHLEY—My friend, Miss Cobbe, having appealed in her letter to the names of my father, Lord Shaftesbury, and my uncle, I feel that I ought not to give a silent vote upon this subject. I am not going to take upon myself the responsibility of saying what course my father would have pursued on the present occasion, but I am perfectly certain that his view would have been extremely modified by the fact that twenty years' faithful, indefatigable and fearless work has done absolutely nothing, and I cannot help thinking that the gentleman from Liverpool, who tells us he represents a very young branch of the Society, will twenty years hence hold very much the view we at present take, if the old policy is pursued. Now, ladies and gentleman, I do not need to repeat what has been already said, and therefore I shall not take up your time many minutes. Mr. George Russell has covered almost the whole ground, but I would just deal with this question, which seems one that has most weight with our opponents, and that is, that we are abandoning our moral attitude of demanding the absolute extinction of vivisection by meanwhile adopting measures which may modify the practices pursued. I believe I am historically accurate when I say that those who worked for the abolition of slavery, worked long before for the abolition of the slave trade. Could people turn round and say, "By working for the abolition of the slave trade you are recognizing the institution of slavery"? (Hear, hear.) Why, the thing belongs to the "Haul down the flag" theory to which allusion has been made. No. If you solemnly assert that you do not abate one iota of your professions and desires, you may, for two or three years perhaps after this new policy is adopted, have this oburgation, this sarcasm, thrown in your teeth, but there is nothing very alarming about that. Now, reference has been made by way of analogy to the case of the United Kingdom Alliance. I think that is very much an analogy; it is very much on all fours with our own case. The doctrine of the founders and leaders of the United Kingdom Alliance is this: that it is an absolute sin to consume any alcoholic liquor. (Col. WATERSTON: No, no.) I beg my friend's pardon. I have gone through ten contested elections and therefore I know to the very bottom what that thing is. I have over and over again said to them, "Now, look here; if you would only give a community, when they have the right of veto, the right to limit the number of public-houses, as well as the right of sweeping them away altogether, I will go in for it!" I have said that over and over again to the Alliance. Oh, no; that would be recognizing the accursed thing! To go and reduce the number of public-houses, though it might do a great deal of practical good, would be to recognize the accursed thing. Now, what has happened? These many years have passed over, and they have done nothing, and at last they have obtained the services of a very distinguished statesman, the Leader of the Opposition, I mean Sir William Harcourt; and what is the only condition on which Sir William Harcourt has undertaken this work? It is, that there shall be inserted a provision that if a community wishes to have a certain limited number of public-houses, that power shall be given to them. I have no doubt that there are a certain number of members who think that they have thereby abandoned the doctrine that consumption of alcoholic liquors is a sin against morality; but they will continue, you will see, for many, many years yet, to proclaim that doctrine, and they will not in practice abandon it, as we in practice shall not abandon the demand for the total abolition of vivisection. (Applause.) Only one word more. It has been said that we shall have just as much difficulty in carrying these modifications and lesser measures as we should have in carrying a measure for total abolition. Now, really, how can you credit such a statement as that? Consider what attitude the Leader of the House of Commons,

say, would take in the matter. I have never spoken to him about it, but if he is an advocate for vivisection, he says, "My physiological friends tell me that you cannot judge of the action of the nerves and the condition of the body when decay has begun to set in; that you must have the living tissue to work upon." If you say, "Yes, but we can give them the living thing without inflicting torture, will you help us?" do you suppose that anybody who is not a fiend in human form—and I do not suppose there are many such in the House of Commons—would refuse to co-operate with you? Of course they would not. Very well, then; our opponents say, "That is true, but you will not be able to carry it out; the law will be evaded." Well, the answer to that has already been given, but I will repeat it. If we pass this Bill prohibiting torture, if we get the Act on the Statute Book, and we find it is evaded, we come forward with the greatest possible argument in favour of the total abolition of vivisection, because we say, "You, the legislature, passed this measure; it is evaded"; and you have the strongest argument in the world for the total abolition of vivisection. Now, I only want to add this. I have, as I am of course bound to have, the greatest respect and affection for Miss Cobbe—affection is not too strong a word. I have read her letter, and it seems to me that Miss Cobbe's view is this—I know she does not intend it—but the only real view is this; we must preserve these tortures and allow them to go on, in order to enable us to have a lever to work for total suppression; because she says when she makes her analogy with the Negro Slavery Movement that if Lesser Measures had been passed, "Could the abolitionists thereafter go about denouncing slave-holding as the sum of all villainies as regards the negro, as we say vivisection is as regards the brutes?" Well, I say we have no right—absolutely no right, if we can prevent it—to say that thousands of brute animals shall be tortured for another half century in order that we may have a strong argument in favour of the total suppression of vivisection. (Applause.) We have no right to do that; on the contrary, if we get a Lesser Measure to forbid torture, and it continues to be evaded, then we shall have the very strongest argument for legislation in the direction of totally suppressing the iniquity.

Mr. HERBERT PHILIPS—Ladies and gentlemen, I represent here the Manchester branch of the Society. As Liverpool has spoken, I thought you might desire to hear a voice from the sister town. Our Society is not as new as the one in Liverpool. We have welcomed the formation of the Liverpool Society, but our own Society has been at work for years. We are not unanimous upon this matter, but by a majority I am authorized to oppose this resolution. In opposing it, I do not consider that I am opposing all practical measures for remedy of the present condition of things. It seems to me that it has been overlooked throughout that the Home Secretary has perfect power to appoint, on our recommendation, if we are prepared to pay his expenses, an inspector. The Act does not in any way preclude the Home Secretary from accepting an inspector at our hands. Therefore, there is no occasion to introduce a Bill in Parliament to get that very considerable amendment of the present state of things. It strikes me very strongly that there has been a note of false hope altogether throughout this debate in regard to these Lesser Measures which we are by this motion, if passed, to authorize the National Society to set on foot. I am strongly of opinion that those of you who are so hopeful overlook the character of the people opposed to us. You cannot suppose for a moment that the physiologists, who are exceedingly acute and exceedingly determined, will not directly we appear in the House of Commons with a measure such as that sketched by Mr. Coleridge, at once say, "See what hypocritical people these are; they use one language in the House of Commons and entirely different language on the platform, where they continue to talk, as before, of total suppression." Then, I say, that as against the immense power of the physiologists—powerful as I believe them to be through the general ignorance and indifference which prevails in the House of Commons, and still more so perhaps in the House of Lords—we have nothing to oppose. They will put forward all their power to resist anything we propose, and we are in no better position in proposing Lesser Measures than we should be in proposing at once total prohibition. For the one as for the other we must have behind us the great mass of the people. If we can interest the great mass of the people of this country against

vivisection, then we shall be strong enough to carry the whole platform. I was very much pained to hear Mr. Evelyn Ashley say that we had made absolutely no progress whatever in the last twenty years. That I must entirely deny. I have been at work for twenty years in this movement, and during that time I have seen a great deal of progress in the way of impressing the cause upon the working classes. I feel that it is useless to talk to the working classes of restriction. The fact is that the late Lord Shaftesbury knew how to address working men when he spoke of this as an "abominable thing;" if you speak of restriction you do not make much headway with the working classes. I really do not see the smallest ground for expecting any success unless we set ourselves to the effort to get the people of England behind us.

Mr. CHANNING, M.P.—I should like to offer one or two words on the motion, mainly in direction of peace. It seems to me that those who are interested in the objects of this Society can have no greater immediate interest than to unite and keep united all the forces in support of this object. I may say that in speaking on this subject I sympathize very warmly, just as I always sympathize very warmly, with the point of view of Miss Cobbe and with some of the observations which have fallen from speakers on the right hand of the room. At the same time it is perfectly obvious that no man or woman in their senses would refuse to give support at any time to measures passing through Parliament which would diminish the sufferings which we wish to absolutely remove. Now the suggestion I should like to make to the mover and seconder of the resolution is, I hope, a suggestion which may mitigate some of the opposition which is felt to the motion. I could not myself vote for the motion as it stands, nor could I vote against it, or for the amendment moved by the representative of the Liverpool Society. My suggestion would be to take out the word "ultimate;" then, if the word "ultimate" is removed, the resolution would affirm that the one central sole object of this Society is to effect the abolition of vivisection, and I would submit that there is a further argument for this amendment in the very able and suggestive speech of Mr. Coleridge himself. Mr. Coleridge dwelt mainly upon these lesser measures as steps which would lead onward to total abolition. Therefore I venture to suggest that the word "ultimate," which certainly does seem to shift into the dim future the real object which makes people care about taking any part in this movement at all, should be omitted, and I should imagine that a great deal or at any rate some of the opposition to the greater and very practical side of this resolution will be removed.

Mr. COLERIDGE—I have very great pleasure in accepting that suggestion.

Colonel WATERSTON—When I came here to-day I came with a perfectly open mind, and after listening to the speeches which have been made in support of the proposals of the committee I am bound to say that like the Apostle of old I was almost persuaded. I come from a Society that has passed its majority. I am one of those who had to do with the agitation of 1876, and therefore claim to have some little knowledge of the subject. In 1876 I took exactly the opposite position to that which I take up to-day. Then I was in favour of the system which I am now against, therefore I know something of the forces that were at work at that time, and I venture to say that before you can lay hold of the issues of to-day you must carry your minds back to the struggle of twenty-two years ago and the issues then raised. Those who were against vivisection, I venture to say, were satisfied with Mr. Cross's Bill introduced in 1876, and it was only when the medical profession saw that there was a consensus of opinion on both sides to accept that Bill, that they made an attempt to get the clause introduced, providing for a certificate being given for the infliction of pain without the application of anæsthetics. If you read the history of the agitation from 1876 you will find that the increase of experiments is very little indeed in connection with those experiments where anæsthetics are administered. The increase is under this unfortunate clause which the doctors secured then for the carrying out of experiments without anæsthetics at all. Now, I did not come here, my Lord, to claim to have any great pedigree. I have worked in the old days with Lord Shaftesbury; I have listened again and again with great pleasure to the late Lord Coleridge; but while I do not claim personally to come from any great parentage, I claim to have

come from the country that had its covenantors, who had a principle and stood firm by that principle. I have not gone through any Parliamentary elections as a candidate, but I have gone through some in connection with candidates. I have gone through several fights as a town councillor, and I know what they are, and I want to say this to the right hon. gentleman opposite (Mr. Ashley). I was at the formation of the United Kingdom Alliance, and while I do not grudge him his opinion, I am here to-day, not holding the opinions he ascribes to the United Kingdom Alliance. It seems to me that whatever constituencies the right hon. gentleman has stood for they require a good deal of light, and I hope he will go back and give it them.

Mr. ASHLEY—Glasgow was one.

Colonel WATERSTON—Now, sir, I listened to-day with considerable feeling to Mr. Russell's speech. I expected something to come from Mr. Russell of a practical kind. I honestly confess that in coming up from Scotland, when I heard before I left that Mr. Russell would speak, I came to look with a considerable amount of interest to the speech that he was to deliver. I have never been a member of Parliament, but unfortunately or fortunately I was for many years in the lobby as a Parliamentary whip, so that I got a good knowledge of both the ins-and-outs then, and I want to ask Mr. Russell this question, and I want to ask Mr. Coleridge to put it to the meeting. It is stated to-day that we have had twenty years of agitation, and that that twenty years' agitation has failed. As one who has studied this question deeply, I venture to affirm that while we have had twenty years' agitation, we have not had twenty years of agitation before the House of Commons. (Hear, hear.) I am here to say in my humble way that I think the leaders of the movement are largely responsible for the apathy that prevails. We have only been during that time on one occasion really before the House of Commons. It was in 1881. I see Mr. Bryan differs, but I ask, let me see the Bill. I always like to get at the facts. I venture to affirm again that we have only on one occasion been before the House, and that was in 1881.

Mr. BRYAN—In 1883 there was a fight.

Colonel WATERSTON—In 1883 there was a sham fight, and, as a semi-military man, I say there is a great difference. 1881 was a fight, but 1883 was a sham fight; and I say that in 1883 our friends of the Anti-Vivisection movement failed to grapple, as I think they ought to have done, with the questions then raised, and even in 1881 we failed to a large extent to meet the arguments that were then brought against us. But supposing we did have a fight in 1881 and again in 1883, does it follow that our position is the same now? I think we have no right to assume that we should fail in the present House of Commons until we have tested it. Now, a gentleman from Manchester has touched a point which I think is of considerable importance. I have very great sympathy with Mr. Coleridge. I venture to say that we in Scotland have manifested our sympathy with the lower animals in the work we have done in the past. But our friend from Manchester spoke truly when he said that for any Bill of ours to have a chance we must get the support of the working classes, for in the present state of things they are the masters of the political situation. I may say, that in that part of Scotland from which I come I am rather looked upon as a leader of that unfortunate class, and I say that unless you present to them the broad understandable principle that this thing is cruel and wrong, you will never arouse the sympathy of that class; no half measures appeal to them. I am quite prepared to admit that a further inspection would be a very great benefit. But let us look at this question of inspection, and this question of experiments without anæsthetics. Is there any sane individual in this room who thinks that the medical profession will allow you to introduce these lesser measures, and not fight you to the death? Take away anæsthetics, and the whole thing they contend for goes to the wall; vivisection without anæsthetics they declare is simply worthless. It has been said that we will never get total abolition. I am not so sure about that, if we go the right way to get it. If we convince the working classes that vivisection is a thing that is essentially wrong, if we get the heart of the people with us, success must follow. It is not for us to go in for lesser measures. If the House of Commons like to give us something less, let us take it, but I believe in going to

Parliament, as I believe in going to a court of law, for the fullest demand that I can make. If my friend Mr. Bryan owed me £5 and I sued him for £3, I should give up my right (at least, it is so in Scotland) to ever get the other £2. My experience of the House of Commons is, that if you ask for half a loaf you will scarcely get a pennyworth of bread. I say, let us stand on the moral ground that vivisection is in itself wicked and useless, and ought to be prohibited. If we are offered anything less than our complete demand, let us take it, but, as a Society, let us wash our hands of the whole thing; let us trust in God, and do the right thing. (Applause.)

The Rev. G. STREET—We have heard some voices from Lancashire. I wish to speak from Lancashire also, but in a somewhat different strain. I also, like the Liverpool gentlemen, represent a new branch; I represent the Bolton branch, which is about the same age as the Liverpool branch; but I, personally, have been attached to this cause ever since I knew what cruelty was, and have systematically worked to advance the principles adopted by the Society. Our Liverpool friend says that his Society has instructed him to oppose the motion. The Bolton Society, on the other hand, is divided; its members are by no means unanimous, but a considerable majority is in favour of the resolution, and they have sent me and the Treasurer of the Society to represent them here. They gave us a perfectly free hand to listen to the discussion, and vote according to our consciences. We think that the principle embodied in the resolution is the right one, and we shall vote in its favour; so that you see practical Lancashire is sometimes divided against itself. It seems to me that Mr. Baird gave away the case for the opposition when he admitted that good would be done by the measures which Mr. Coleridge suggests. If the Society can by any means relieve the sufferings of the animals who are now subjected to these tortures, no opportunity of doing so should be thrown away. I was glad to hear the remarks that fell from Mr. Channing. I was myself prepared to move an amendment on the lines he suggested, and I am very glad that his suggestions were accepted by Mr. Coleridge. I can understand that the expression "lesser measures" may have upset some of our friends, and I think that perhaps some of their opposition would be met if Mr. Coleridge would alter the wording to "preliminary measures."

The CHAIRMAN—Do you propose to move that as an amendment?

The Rev. G. STREET—Will the mover and seconder of the resolution adopt the suggestion?

Mr. COLERIDGE—I would accept the words "other measures."

The Rev. G. STREET—I will not press the matter at all, but I wanted to conciliate our friends as much as possible. I want to avoid anything in the way of secession from our Society—(applause)—and if there is anything in the way of philanthropy that would remove the objections felt to the proposals of the Committee, I think we should adopt it. With the spirit of those proposals I am in thorough accord. As I understand it, it is that, without abating in the least our demand for the whole suppression of vivisection, we should take advantage of any opportunity that may offer to secure some measure of protection for the animals.

The CHAIRMAN then put the amendment moved by Mr. Howard. There voted, for the amendment, 23; against, 26. The amendment was therefore lost.

On the original resolution being again proposed,

The Rev. G. STREET moved as a further amendment:—

That nothing less than the total abolition of vivisection, a principle to which the Society is deeply committed, will finally remove the grave evils which it condemns; that to this end the chief efforts of the Society, as hitherto, will be directed to the education of the public conscience to demand absolute prohibition of the practice, and meanwhile it holds itself free to initiate or support such preliminary measures as are calculated to cripple the powers of the vivisectionists and lessen the amount of scientific torture inflicted on animals.

The amendment was put, without discussion, and was lost.

A division was then taken on the original resolution. The numbers were (excluding one teller on each side): For the resolution, 29; against, 21.

The proceedings then terminated.

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THE ZOOPLILIST.

Issued by the NATIONAL ANTI-VIVISECTION SOCIETY, 20, VICTORIA STREET, LONDON, S.W.

VOL. XVII. No. 12.]

LONDON, APRIL 1, 1898.

[POST FREE, 3½d.

The *Zoophilist* may be obtained through any bookseller, from Messrs. Swan Sonnenschein & Co., Paternoster Square; Messrs. Pewtress & Co., 28, Little Queen Street, Lincoln's Inn Fields; or from the office of the Society. Subscription, 3s. 6d. per annum, prepaid.

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NOTES AND NOTICES.

THE Church Anti-Vivisection League took an energetic part in securing the favourable result from the late School Board elections in London.

MR. JOHN E. ELLIS, M.P., has given notice to raise a debate in the House of Commons when the vote for the Inspectors' salaries comes up for consideration. Mr. Ellis has also kindly consented to attend and speak at the Society's annual meeting.

WE are reminded that the article reprinted in our February issue, entitled "Can a Dog Reason?" was first published in *Our Animal Friends*, this being the title of the official organ of the American Society P.C.A. of New York.

THE Rev. Ambrose Shepherd, the popular Congregational minister at Reading, who has often rendered our cause great service in that town, is leaving his pastorate for that of Elgin Place, Glasgow. The *Reading Observer*, announcing his departure, says:—

"No tale of oppression finds a careless hearer in him, and he is prompt to champion, at cost of personal trouble, the cause of those who appear to him to be injured. Armenians, Greece in her hour of trouble, the dumb victims of vivisection—all have had a strong word of defence from him. He hates all that vitiates and debases."

We commend him to our Glasgow friends as an earnest and vigorous helper in the cause of the animals.

"OUIDA," in a letter to Dr. Berdoe, says it is proposed in Italy to make Professor Sanarelli, of the yellow

fever inoculations, the chief of the Laboratorie di Sanità. The distinguished novelist has written to the Premier, the Marquis di Rudini, informing him of the scientific atrocities perpetrated at Montevideo by this bacteriologist, and protesting against the proposed appointment.

THE appearance of Dr. Campbell Black, late Professor of Physiology in Andersen's Medical School, Glasgow, on the platform of the Scottish Anti-Vivisection Society in that city, is a noteworthy event. Dr. Black had the courage to enforce his conscientious opinions about the germ theory of disease from his professorial chair, and was consequently persecuted and deposed. We are glad to find that his courage has not thereby been diminished, and that he continues to champion what he believes to be the truth. A report of his remarks will be found in our Home Intelligence.

THE Southport auxiliary of the Parent Society, which has now existed for many years, has lately shown signs of increasing energy. We were specially glad to see that the Rev. Dr. Porter, one of the earliest members of the Southport Committee, attended and gave a vigorous address at the annual meeting of the local Branch, which was held towards the end of February, and is reported on another page. It is always an advantage to have somebody and something to answer, and Mr. G. M. Dent gave Dr. Porter his opportunity, of which the latter did not fail to make full use. It is a long time since we read or published a speech with greater pleasure.

THE Manchester Branch, too, have had a successful year, and likewise a successful annual meeting. The tone of their report is decidedly not only hopeful but encouraging, and so long as the Society of the Northern Metropolis is so well directed and supported, no doubt its energy and enthusiasm will continue to stand high. There is plenty of scope for our fellow-workers in and around Manchester, and the more they labour to imbue the public mind—already pretty well enlightened—with the true view of vivisection, the more they will help towards ultimate success.

PETITIONS to Parliament were presented to the House of Commons, on February 10th, from inhabitants of Hampstead, in meeting assembled at 16, Tanza Road, on 28th January, 1898, G. S. Chaplin, chairman, by Mr. Edward Hoare; on February 15th, from members of the Society of Friends and others, in meeting assembled in the Cutlers' Hall, Bristol, Joseph Fry, chairman, by Sir Edward Hill; on February 25th, from there undersigned inhabitants of Macclesfield, by Mr. Davenport, the latter bearing 490 signatures.

The Petitioners prayed for the total Prohibition of Vivisection.

WE are pleased to learn that at the annual meeting of the Phillips Memorial Hospital, held at Bromley, on the 17th ult.—

Dr. Madden proposed that an addition be made to their fundamental laws in the following words: "No experiments in the nature of vivisection shall at any time be performed within the building or the premises of this institution." He added that he did not know of any hospitals where such experiments were performed, and he did not think there were any in which they should be permitted. Even if such experiments were permissible at all, a hospital was not the right place for them to be made. Quite apart from the merits of the resolution, which were enough to commend it, by passing this they were only fulfilling a pledge they made to one of their kindest supporters last year. Mr. A. E. Beddow, in seconding, said that even if these experiments did not take place in the hospitals, they did, sometimes, in the medical schools, which were either attached to the hospitals or in close proximity to them,—and that, he considered, was practically the same thing. The motion was carried unanimously.

This is a meritorious and reassuring step, and one which we should like to see imitated wherever it may be deemed desirable or necessary.

WE learn from the *London Hospital Gazette* for February that at the Medical College connected with this charity there will shortly be established "what promises to be the best bacteriological department in London—an animal room, special research laboratories, and all the necessary appendages for the cultivation and study of the wily bacillus."

THE *London Hospital Gazette*, in its February *Clinical Supplement*, also contains an account of experiments on the heart by Mr. Harold Barnard, which surpass in horror any of which we have read for a long time. A cat "anæsthetised by chloroform," was connected with an artificial respiration apparatus, the chest was then opened, the bag containing the heart slit up and the heart inserted into an india-rubber tennis ball, a glass tube was placed in the interior in connection with a recording instrument. Then various drugs were injected into the veins or otherwise into the animal's system to test their effect. Ammonia injected threw the heart into spasm, it became "a hard ball dimpled on the surface." Can any sane person believe that the action of a drug on a normal human being is to be studied by its effects on a mangled cat, whose heart is stuffed into a tennis ball?

PROFESSOR CADIOT'S *Exercises in Equine Surgery* is a description of the work of the Alfort Veterinary School, an institution infamous on account of its vivisections. The author's preface states that "all operations are made upon the cadaver except those made upon the animal while in a state of anæsthesia secured by an intravenous injection of chloral hydrate." There are fifty-six illustrations in the book, and from a consideration of these and of the details of the operations to which they relate, we have no hesitation in saying that chloral hydrate or any other merely stupefying drug is wholly inadequate for ensuring freedom from acute suffering under most of the operations.

THE *Medical Annual* for 1898, just published, opens with an article by Dr. William Murrell, the lecturer on *Materia Medica* at Westminster Hospital. He says

"the treatment of diphtheria by antitoxic serum is not making the advance that was anticipated. "Albuminuria is certainly due to the use of the anti-toxin." That is to say, it is apt to cause kidney disease, as Dr. Lennox Browne pointed out some time ago. Dr. Murrell further says—

"The results obtained in the treatment of septicæmia [contamination of the blood with putrefying matters] by means of the antitoxic serum of Marmorek have been less favourable than those which have followed the use of the antitoxin in diphtheria. Its employment in the treatment of puerperal fever has not been attended with success."

AT the Liverpool Medical Institution on February 17th, a case was mentioned by Dr. Nathan Ram which illustrates some of the perils of serum inoculation. Antistreptococcus serum was injected for puerperal fever, and we learn from the *British Medical Journal* that the latter injections caused severe symptoms, such as thrombosis or blocking of the veins and inflammation of the kidneys, which led the doctor to suspect the serum to be impure. It was afterwards discovered that this was the case, and was probably due to defective filtration of the serum.

THE operation for transfusion of blood has often been instanced as having originated from experiments on animals. The *British Medical Journal*, April 10th, 1880, said that transfusion was now "often performed in urgent cases with the result of saving many lives." The *British Medical Journal* knows better to-day. In its issue for February 26th, 1898, we read (page 580) that "when a patient recovered after transfusion of blood by any method it meant that transfusion had failed, the blood having escaped into the cellular tissue outside the circulation; whilst transfusion, mechanically successful, was in itself deadly."

IN a French publisher's prospectus, lately sent to us, there is announced a work on Human Physiology, by Dr. Waller, Professor of Physiology at St. Mary's Hospital, London, which has been translated into French. The publisher (or may be the translator, Dr. Herzen) makes a note about the work which, from our point of view, is not only interesting but instructive. He says:—

"M. Waller n'oublie jamais qu'il s'adresse non à de futurs physiologistes, mais à de futurs médecins pour lesquels la physiologie est assurément une des bases les plus indispensables de la pathologie, mais pour lesquels elle n'est pourtant qu'une science auxiliaire, un moyen et non un but; aussi s'efforce-t-il toujours d'indiquer, en quelques mots pour le moins, les perturbations auxquelles sont sujets les phénomènes physiologiques et de faire ressortir ainsi le lien étroit qui les unit aux phénomènes pathologiques, ceux-ci n'étant au fond qu'une déviation de ceux-là."

So that a physiologist, when candid, has to admit that physiological phenomena are liable to disturbances which prevent anything like exact inferences being drawn, which is precisely one of the grounds on which we base our estimate of the worthlessness of vivisection as a scientific method.

WE learn through the medium of the *Chemist and Druggist* that in the last edition of "Veterinary Counter-practice" (page 101) it is stated that mallein, an extract of the products of the bacillus of glanders (*B. mallei*), is being largely used for diagnosing the disease. At a meeting of the Central Veterinary Medical Society held on March 3rd, Mr. W. E. Taylor, M.R.C.V.S., veterinary surgeon to the London Road Car Company,

read a paper on "Mallein and its Uses," and a resolution was unanimously carried:

That this meeting is convinced that the experience possessed by British veterinarians has thoroughly established the reliability of mallein for diagnostic purposes in horses suspected of glanders.

It may be that glanders is discovered in every case where mallein is used and a reaction takes place; but is it quite certain that the mallein and the glanders do not occupy the positions of cause and effect?

DR. SINCLAIR WHITE, in a recent address at the Sheffield Medico-Chirurgical Society on the progress of British surgery during the Victorian reign, said that Lister's antiseptic system was the most important in its results in the history of surgery, but occasionally in his opinion "surgical enterprise had over-reached the bounds of prudence." This is a very mild way of putting it. The late Mr. Erichsen once asked, "Will the surgery of our time record surgical triumphs or operative audacities?" We are inclined to substitute the word "atrocities."

PLINY complained that medical practitioners were the only people who could commit murder with impunity. Dr. Jackson, Lecturer on Surgery to the Sheffield School of Medicine, once said, referring to the St. Bartholomew's Hospital reports (1884), that "unnecessary operations are still performed. It does seem to me that we are going too fast." It must be remembered that if the Listerian treatment has saved some lives it has sacrificed thousands by tempting the surgeon into dangerous rashness in dealing with patients.

MR. SWALE VINCENT reports the results of some experiments with extract of the supra-renal capsules in the *Journal of Physiology* (Vol. xxii., No. 4, p. 270). He administered poisonous doses of the extract to four dogs and two cats. The first effect was excitement, then agitation and trembling, followed by paralysis; before this finally set in "muscular effort appeared to be accompanied by pain, the dog frequently raises a limb from the floor as if the contact were painful." Vomiting, convulsions, great thirst, restlessness, and whining indicated the suffering of the animals, which, of course, could not be relieved by anæsthetics.

THE difficulty of enforcing complete and continuous anæsthesia in the physiological laboratory is well illustrated in a paper on the "Motor Centres of the Opossum," by Dr. Cunningham, in the *Journal of Physiology* (Vol. xxii., No. 4) wherein that experimenter says:—

"If the animal be first deeply etherized, as is usually done while the cranial cavity is being opened, and then the etherization suspended for the profound narcosis to diminish [in plain English, to allow the animal to partially recover from the anæsthetic] it generally happens that just before the animal recovers sufficiently to make more or less haphazard voluntary movements of the limbs and body, it falls into a peculiar quiet state in which it seems to be very profoundly narcotized. In reality, however, the narcosis is slight, and the application of even a mild electrical stimulus to the cortex [surface of the brain] will often so arouse the animal that it will suddenly make fairly vigorous struggling movements."

HERE, then, we have a confession that in so cruel an operation as opening an animal's skull and exposing its brain the experimenter will permit the animal to recover from the anæsthetic sufficiently to allow it to "make

fairly vigorous struggling movements." These are explained to be "voluntary struggles," and they may "continue until the animal is quieted by a further dose of the anæsthetic." In the case of the opossum it is admitted that "only in a condition of imperfect narcosis [that is, of incomplete anæsthesia] was it possible to produce by stimuli of reasonable strength movements of the opposite hind limb."

Now the vivisector in such a case could safely assure our interrogator that the animal experimented upon was under the influence of the anæsthetic from beginning to end of the experiment. He would not feel bound always to admit, as Dr. Cunningham admits in his paper, that for the purpose of his research it was necessary now and then to let the animal recover sufficiently to enable it to make vigorous voluntary movements under electrical stimulation of the exposed brain.

DYSPEPTICS must be on their guard lest they lose their stomachs. It has been proved that dogs can survive the removal of the chief organ of digestion, and Dr. Carl Schlatter, of Zürich, has recently performed the operation of removing it from a cancerous patient. The *Medical Brief*, commenting on "this interesting fact," says that the success of this proceeding will tend to make surgeons more enthusiastic, and that there will be an epidemic of this operation. "Surgeons who possess more mechanical skill than conscience will be only too glad of an excuse to enlarge the scope of their profession, and a dyspeptic would be safer in the hands of a dangerous lunatic than to consult such an one."

THE *Medical Brief*, an organ which has opposed the use of anti-toxin from the first, says that "Octol" is beginning to take its place with the less credulous thinking part of the medical profession. Octol is a solution of one-eighth of one per cent. of carbolic acid in pure water; it possesses all the therapeutic properties of anti-toxin, without any of the dangers of the fraudulent horse serum.

DR. LEONARD HILL, replying to Dr. Lauder Brunton's strictures in the *British Medical Journal* makes a most important admission relative to the number of animals used in the physiological laboratories for the purpose of experiment. He says (March 19th, 1898, p. 755):—

"The Hyderabad Commission continually dwells on the vast number of animals on which experiments were performed. It is obvious that in forty-seven days Dr. Brunton could have personally investigated but a small proportion of the 571 animals. Day by day and year by year the sum of animals chloroformed by any busy physiologist grows to a far greater total than this."

A far greater number than 571 would be perhaps 1,000 at least; say there are twenty busy physiologists at work in Great Britain, that would make twenty thousand animals per annum used for experiments in this country alone.

KOCH's tuberculin dies hard. The new injection is called "Tuberculin R," and this is how Dr. Kernig writes of it (see *British Medical Journal, Epitome*, March 19th, 1898, p. 47):—

"Tuberculin R. produces exactly the same manifestations as the old tuberculin . . . This dangerous and concentrated poison is recommended for patients who are not in the clinical sense very ill and who improve greatly under suitable treatment."

There laboratory experimenters are merely murderers under a more fashionable name.

HOME INTELLIGENCE.

LONDON AND DISTRICT.
CROYDON.

In response to a kind invitation from Mrs. Horsnail, a large number of friends assembled on February 16th, in the drawing room at 11, Cannir Road, to hear addresses on vivisection. Mrs. LESTER REED occupied the chair, and said we should look at vivisection from the standpoint of the animals, not only from our own. The REV. T. PERKINS, Mr. EDMUND WRIGHT BROOKS, and Mrs. ANNIE THURSTON (Hon. Sec. of the Local Labour Church), spoke.

HIGHGATE.

Mr. H. Dell, of 78, Cromwell Avenue, Highgate, kindly lent his drawing room for an anti-vivisection meeting on Thursday, February 17th. The Rev. J. R. Wood took the chair, and the Rev. T. PERKINS controverted the opinion that vivisection could not be cruel because men professedly humane practised it. Mr. E. W. BROOKS dwelt upon the constant changes in the fashion of medical treatment of diseases. Vivisection was the fashion now, and the bulk of the medical profession (though there were noteworthy exceptions) therefore expressed approval of it. Public opinion must be brought to bear on the medical profession to stop it. Mr. SARGEANT argued on the opposite side, and was replied to by Mr. PERKINS.

BETHNAL GREEN.

THE FIRST GORDON LECTURE.

On Monday evening, the 28th of February, Dr. Edward Berdoe delivered a lecture on "Mind in the Lower Animals," at the Bethnal Green Free Library. There was a good attendance, and the lecturer was followed with the closest attention throughout. Mr. LAMB presided, and informed the meeting that the late Miss Julia Emily Gordon had left a sum of money by will to the Library, to provide for the annual delivery of a lecture on kindness to animals.

Dr. BERDOE commenced by stating that the old distinction between instinct and reason could no longer in the light of scientific research be maintained. Animals were possessed of an intelligence which at least contained the elements of reason and no scientific men could now be found to agree with the old philosophers that animals were mere machines, impelled to act by a spring, like that of a watch. Illustrating his subject by a great number of facts authenticated by naturalists, he proved that animals possessed all the good qualities usually considered peculiar to man, with few of the vices of the lords of creation. The habits of ants, bees, birds, dogs, cats, and other quadrupeds were passed in review, and numerous amusing anecdotes were related of their domestic, political, and social life, which tended to prove that man had not only treated the inferior creatures with ignorant disdain, but had grossly infringed the law of love by persistent cruelty towards them. He denounced the practice of vivisection as the crying sin of the century's civilization, because the inculcation of cruelty as a duty was diabolical, whereas careless inhumanity was often due to ignorance and thoughtlessness. The lecture was illustrated by a number of beautiful lantern pictures, and Dr. Berdoe was accorded a hearty vote of thanks for his instructive and entertaining lecture.

MEETING AT UPPER NORWOOD.

On Tuesday, March 15th, Mrs. and Miss Hayman Dod devoted their handsome drawing-rooms at "Westerfield" to the purpose of a meeting to consider "The Suffering of Animals and Man's Duty with regard to them."

The Rev. THOMAS PERKINS made an excellent speech on vivisection, pointing out what he thought were the fatal mistakes it had led physiologists to commit, and also the disquieting fact that the very doctors who practice it are nearly always connected with hospitals. He attributed their attempt to gain knowledge by unlawful means to a direct temptation of the Evil One. Mr. Perkins also drew attention to the rapid increase of vivisection in England, a large number of the experiments taking the form of inoculation of healthy and innocent creatures with diseases.

Miss GOFF, the next speaker, called on the audience to consider the wrong done to the too long-suffering British tax-payer in that large salaries are paid out of his pocket to physiologists who try to build up their fame by deeds which the public would cry out upon if they were done less in the dark. As Englishmen had in their hands, to some

extent at least, the making and safeguarding of their own laws, and the disposal of their own heavy taxes, it was to be hoped that they had but to know of these things to put a stop to so great an abuse.

Mrs. PHILLIPS, of Croydon, delivered a not unmerited rebuke to ladies for their thoughtless persistency in wearing aigrettes.

On the motion of Mr. GILBERT HARRISON, the chairman, a memorial to the Home Secretary against licensing the Pasteur Institute was unanimously adopted, and the meeting closed with a vote of thanks to Mrs. and Miss Hayman Dod, who generously provided tea for their numerous visitors.

BRISTOL.

During the month of February, Mr. T. A. Williams addressed numerous meetings in and around Bristol. Several large Bible classes were visited and spoken to and much interest was evinced among the members. On the whole the work and the interest in it have been well maintained in this part of the country of late.

On Sunday afternoon, March 20th, Mr. Williams addressed the Kingswood Wesleyan Bible Class on the "Crime of Cruelty." There was a large attendance of members and friends, presided over by Mr. George Francombe. Mr. WILLIAMS said he was glad to find that the Bible Class had invited him to speak upon the question of cruelty. There was a growing interest in the popular mind upon the subject, which was one that demanded the attention of all religious persons. He instanced several phases of cruelty in human society, and then went on to cite the vivisection of animals, which he said was the only cruelty that was deliberately defended to-day. Because of the alleged increase of knowledge which it was said to have brought, people were of opinion that the practice was right. He denied that knowledge was the chief aim of existence, and the cruelty of vivisection was of such a nature as must lead them to forbid the practice as being opposed to the highest interests of men. If the question of utility had not been raised to blind the moral vision, the people of England probably would long ere now have risen in protest against this crime. He invited the meeting to a careful consideration of their duty upon this question, and he believed they would find that they must help in the creation of a public conscience upon the principle involved. He assured them that the discoveries and benefits of which they heard so much existed largely only in theory. To insist upon the proper housing of the poor had more to do with health than all the vivisections ever performed; to teach people cleanliness of mind and body, temperance in eating and drinking, was to accomplish something real; but even though it was estimated that a million experiments were performed every year in Europe, the results were difficult to find. Would they help in this righteous work of preventing cruelty? Several gentlemen spoke and expressed their sympathy with the cause which had been advocated. It was decided to petition Parliament, and Mr. Williams was thanked for his lecture.

MACCLESFIELD.

A GOOD PETITION TO PARLIAMENT.

After the last annual Anti-vivisection meeting in November, 1897, a few friends got up a petition against vivisection, which resulted in a return of 500 signatures, of which 400 were those of voters in the Macclesfield Division, including the Mayor, the Ex-Mayor, and nearly all the most representative names in Macclesfield. Had it been practicable to make a house to house canvas, there is no doubt that the signatures would have been more than double the number. The petition for the House of Commons was handed to Mr. Bromley-Davenport, for presentation, while Lord Stanley, of Alderley, kindly undertook to present its counterpart to the House of Lords.

SHEFFIELD.

At the Rutland Institute on Thursday night, March 10th, a meeting was held "to protest against cruel experiments on living animals." There was a large attendance of the members of the Sheffield branch of the National Anti-Vivisection Society and others, and the main feature of the gathering was an address by Mrs. Philips, member of the Manchester Anti-Vivisection Society, explanatory of the principles and aims of the movement.

Mr. ISAAC MILNER presided, and said that the terrible tortures inflicted on animals in the so-called name of science made it necessary for them, in the interests of humanity and of the dumb creation to call into being a public opinion which should prevent such things being done. Those who performed these horrible experiments themselves unblushingly admitted that they were carried on solely in the interests of what they called knowledge, and with very little regard to the interests of the human race. (Hear, hear.)

Mrs. PHILIPS, in the course of an interesting address, said they pleaded for the abolition of a very cruel wrong which was being daily perpetrated. She pointed out that in nearly every town where vivisection was carried on, the experiments were conducted in secret, whether in laboratories or institutions. The people's responsibility was all the greater because the use of the living bodies of animals for the purpose of experiment had been legalized on the plea that it was necessary in the cause of scientific knowledge. The experiments they complained of were either physiological experiments, the study of the processes of life—which the speaker characterized as being more properly studies of the processes of death—and pathological experiments, which consisted of the artificial creation of diseases in animals for the purpose of studying them, and which resulted in a dreadful amount of unnecessary suffering in the animals. Although these experiments were conducted under the cover of high sounding names, they were none the less to be protested against as cruel. The object of the anti-vivisection movement was to get these horrible practices abolished by statute, and to do that they sought to explain what vivisection really meant in order to get the public to realize it. It was only through these means that slavery was abolished. Vivisection was a grave danger to the medical profession, and to the morality of any one who sanctioned it. English people were especially responsible for the continuance of vivisection, in that this was the only country in which it had been legalized by Act of Parliament. She went on to show that the Act was in reality a sham, in that it does not restrict experiments at all. The general public were deluded into the opposite belief, and so took no further trouble in the matter. Although clauses were inserted in the original Act requiring the use of anæsthetics or the killing of the animals before recovery, there was another clause dispensing with all humane obligations. Certificates were also given enabling the holders to vivisect without using anæsthetics. Vivisection could at present give these certificates to one another, and with the authority of these certificates were inflicted the most atrocious cruelties conceivable. According to the Parliamentary returns of experiments on living animals in England and Scotland for 1896, the experiments returned as performed amounted to the enormous number of 7,500, an increase of 2,821 on those of the previous year, which was likely to continue. Of these 6,347 were avowedly done under certificates dispensing entirely with the use of anæsthetics, or obligation to kill the animal before recovering from the effects. The remaining 1,153 were performed either under a simple licence, or to illustrate lectures, but there was no guarantee that the animals used were insensible during their performance. These statistics by themselves did not by any means tell the whole tale of vivisection in this country. The report of the Act was nothing more or less than a fraud, which deceived a credulous public into thinking that nothing wrong was done. The vivisection clique were a very powerful and numerous body, who well knew how to undermine any restrictions imposed. The existence of the practice was a serious responsibility to the people of the country, because it was in their power to end it, and it only needed a decided expression of public opinion through the machinery of public government to put an end to this "meanest crime." (Applause.)

The following resolution was moved by Mr. A. REYNOLDS, seconded by Mr. F. W. MILNES, and carried:—"Believing the cruelty practised in the name of science by vivisection to be immoral, and that from wider knowledge and the best medical testimony it is found to be useless and even misleading, this meeting pledges itself to help in every way to further the anti-vivisection movement."

A SUCCESSFUL DEBATE.

On Thursday evening, March 8th, at a full meeting of Dore Union Church Literary Society, a debate took place on

"Should Vivisection be Permitted?" Mr. WAINWRIGHT, for the affirmative, argued that experiment was essential to the progress, nay, to the existence of sciences such as chemistry, electricity, etc., and by analogy, to physiology; that the giving of pain to animals and men is justifiable if more than counter-balanced by the good achieved, that good being unobtainable by any other means; and he then pointed to what vivisection had done for the advancement of medical knowledge. For the negative Mrs. SMITH dwelt upon the wrong of inflicting pain upon defenceless animals entrusted to our care, and quoted authorities, principally Mr. Lawson Tait, to prove the uselessness of vivisection. The two sides were respectively supported by Mr. Wostenholme and Dr. C. A. Thorne on the one hand, and Mr. E. S. Nutt and Mr. B. Walker on the other; and on division a good majority declared against vivisection, the negative side carrying the day.

LEAMINGTON.

A drawing-room meeting was held by the kind invitation of Mrs. Mason, at The Vern, Landsdown Circus, Leamington, on March 11th. The chair was taken by the Rev. G. E. A. PARGITER, vicar of the parish, who, while deprecating the repetition of experiments, maintained the right of man to use animals for original research. The Rev. T. PERKINS, who had been invited to give the address on Vivisection, entered fully into the matter, controverted the Chairman's statement, and maintained that, as a matter of fact, vivisection was unnecessary and misleading, and even if benefit to the human race should now be shown to result from vivisection, we were precluded from using this means of research because it was contrary to the eternal laws of mercy and justice.

HORWICH, BOLTON.

The *Bolton Chronicle* of the 19th ult. published a report, extending to two-and-a-half columns, of the proceedings at a meeting organized by the Bolton Branch, at Horwich, Lancashire, and held on the 10th of March. The principal address was given by the Rev. THOS. PERKINS, of Turnworth. The Rev. S. Thompson, Unitarian minister, of Rivington, presided, and was supported on the platform by Miss M. E. Wolfenden, hon. secretary of the Bolton Branch of the National Anti-Vivisection Society; the Rev. C. J. Street, Unitarian minister, of Bolton; the Rev. B. Davies, Baptist minister, of Horwich; and Mrs. Crompton, of Rivington Hall. Miss WOLFENDEN, at the request of the CHAIRMAN, read letters of apology for absence from Canon Doman, the Rev. H. S. Pigot (vicar of Horwich), the Rev. H. E. Lovelady (curate of Horwich), the Rev. R. C. Moore, and the president of the Women's Co-operative Union, Bolton. The letters generally expressed sympathy with the object of the meeting. Mr. Pigot wrote that he had the greatest abhorrence of vivisection.

The CHAIRMAN said: Some people, he was told, were scarcely aware of the meaning of the word vivisection. It simply meant the cutting up of animals alive. The pretext was that it was to further science, but it was a pretext that could not be substantiated. It was a most important subject to consider, because it involved the treatment of the lower animals, which were undoubtedly their care. Some people thought that animals had no rights, but such a proposition was antagonistic to the spirit of Christianity. (Hear, hear.) Man had been placed at the head of creation. He was his brother's keeper, not only in regard to humanity, but in regard, too, to the lower animals, as the custodian of that which was below him; and it was his duty, in the name of that which was right and just towards the lower animals, to try to put a stop to the monstrous system adopted towards these animals. It almost turned one sick to think that men, with hearts in their bosoms, should perpetrate such cruelties as were practised upon these unoffending animals; it was something too awful to contemplate. (Applause.)

The Rev. T. PERKINS said that under the Act for the Prevention of Cruelty to Animals, vivisection would be prohibited were it not for the fact that it was licensed by Act of Parliament. The Act said that it was desirable to extend the law as to cruelty to animals so as to cover experiments upon animals, that the animal must be under the influence of some anæsthetic, and must be killed before awakening to consciousness. If it had stopped there the horrors of vivisection would

have been much less than at present; but an agitation was got up with the result that the law empowered the Home Secretary to issue certificates authorizing experimenters to dispense with anæsthetics. He quoted many eminent medical authorities in support of his belief that vivisection had not benefited and was not likely to benefit the human race, and again others in confirmation of its horrors. He alluded to the fact that last year over 7,000 animals were vivisected as officially reported, and wound up with an eloquent appeal to his audience to bring their influence to bear upon their members of Parliament to induce them to support any Bill brought in for total abolition, restriction, or amendment of the practice.

The Rev. B. DAVIES proposed the following resolution:—"That in the opinion of this meeting the growing practice of vivisection is an unworthy application of the noble scientific spirit, and an unjustifiable breach of duty towards the animal creation; that the pursuit of knowledge can never necessitate the infliction of incalculable suffering on sensitive creatures, incapable of protecting themselves; and that a method so revolting is calculated to degrade the higher nature of those who participate in it; this meeting therefore calls for an Act of Parliament to render the practice of vivisection illegal."

Mrs. CROMPTON said it gave her great pleasure to second the resolution, and she endorsed every word of it. There was one point she would like to add to it—and she was sure Mr. Davies would permit her to add it—that not only ought they to support it because they were against giving pain to animals, but also for the sake of the vivisectioners themselves. She thought they required to be defended from themselves—from the law, which made them inhuman creatures, and did them a deal of harm, while doing no one any good. If it were only to prevent men of the medical profession from deteriorating into inhuman creatures, as they were bound, subjected to such influences, to become, instead of helpers of humanity and curers of pain, she would heartily second the resolution because she thought we owed a very great deal to medical men who were helpers of humanity, though not to those who were misleading humanity, and doing so much injury to creatures as to whom they did not know whether they had souls or not. (Applause.) She thought some kinds of animals that had been domesticated for generations, and lived so closely related to us in our homes, almost had souls. (Hear, hear.) She had seen both dogs and horses that looked at her as if they understood every word she said to them; and she thought it a most horrible thing that animals like these were to be sacrificed for the benefit of somebody else, not for the benefit of themselves. (Loud applause.)

The CHAIRMAN having invited questions to the lecturer,

Mr. T. JEFFERSON asked whether the promoters of vivisection were high-class medical men, or only the second-rate men of the profession.

Mr. PERKINS replied that there was no doubt that the great bulk of the profession knew absolutely nothing about vivisection, and had never seen a vivisectional experiment performed, though undoubtedly some of the burning and shining lights of the profession were in favour of vivisection, but all the leading men in it were not.

Mr. JEFFERSON asked if vivisection formed any part of the curriculum of the medical student?

Mr. PERKINS replied that it did not. Students might have it explained to them, yet were not allowed to practise it.

In reply to Miss Wolfenden, Mr. PERKINS said he believed the object of vivisectioners was not so much the benefiting of humanity as the increase of scientific knowledge.

The CHAIRMAN observed that experiments were repeated when the results were already known. This was horrid cruelty, and it was high time they did their utmost to stop it.

The resolution was put, and carried unanimously.

The Rev. C. J. STREET moved the heartiest thanks to Mr. Perkins for his admirable address, and to Mr. Thompson for presiding. He also invited the audience to sign, before leaving, petitions lying for signature in the room, to the Houses of Commons and Lords.

Mr. JEFFERSON seconded the motion of thanks, making sympathetic remarks on the subject of the lecture.

The vote was heartily carried, and the Chairman's acknowledgment concluded the meeting.

A large number of those present afterwards signed the petitions which had been prepared.

THE SCOTTISH SOCIETY.

EDINBURGH.

On Tuesday, the 8th March, a meeting was held at Mrs. Campbell's, Glengyle Terrace, Edinburgh. The Rev. John Baird presided, and there was a good attendance. The Rev. Dr. Kerr, of Glasgow, gave an address on "Some of our Reasons for Opposing Vivisection." The Rev. F. L. Armitage, the Rev. Wm. Allan, M.A., Gen. Grant, Mr. Scott Moncrieff, Mrs. Campbell, and Col. Waterson also took part. There was a large distribution of literature at the close.

GLASGOW.

SPEECH OF DR. CAMPBELL BLACK.

The monthly prayer meeting was held in the Protestant Alliance Rooms, Argyle Arcade, Glasgow, on Tuesday, the 2nd March, when the Rev. J. W. Mitchell presided.

On Friday afternoon, the 11th March, a meeting was held in the Christian Institute, Bothwell Street, Glasgow. W. C. Maughan, Esq., J.P., presided, and was supported on the platform by Dr. Campbell Black, the Revs. John Baird, Dr. Kerr, and J. S. Smith. The attendance was composed principally of medical men. Dr. D. CAMPBELL BLACK, M.D., F.R.S., Edinburgh, Emeritus Professor of Physiology in Andersen's College Medical School, Glasgow, delivered a lecture on "The Germ Theory of Disease and its Fallacies." He began by remarking that the art of medicine stood amongst the most conjectural of arts, so that inquiry into it was most subtle and difficult. Two outstanding obstacles to the advance of medical science were the deference paid to authority by practitioners of medicine, and the fact that medicine and surgery were followed as a means of earning a livelihood. During the past 25 years the theory of disease which had found most acceptance amongst orthodox practitioners was the germ theory, which was based on the eminently fallacious conclusions of Pasteur. Disease might be due to influences disturbing the circulation of the blood, such as impressions on the nerve system; disease of the tubes themselves, or of the blood vessels, and unhealthy blood arising from the retention of excrementitious products, or other deleterious influences from without. All diseases might be relegated to one or other of these categories. He did not deny that there were a few diseases due to parasites, but he emphatically denied the validity of the parasite theory in its application to the entire domain of either medicine or surgery. The lecturer then went on to deal with the Lister theory, in disproof of the soundness of which he quoted numerous eminent medical authorities. For nearly thirty years, he said, the germ theory of Listerism—based on the specious conclusions of Pasteur, a luxuriant imagination, an intellectual hemanopic—had fascinated the surgical world, but like many other fads in medicine and surgery it must now be spoken of in the past tense. In conclusion, Dr. Black held, among other things, that molecular death invariably preceded the appearance of all low forms of life which existed wherever organic matter was found in a state of decay, in contact with atmospheric air.

The Rev. J. BAIRD, in moving a vote of thanks to the lecturer, intimated that Dr. Campbell Black had also agreed to lecture in Edinburgh under the auspices of the Scottish Anti-Vivisection Society.

OUR CAUSE IN THE PRESS.

STRAY DOGS AND PASTEUR'S INOCULATIONS.

(FROM THE "BATH HERALD," MARCH 3RD.)

SIR,—Dr. Melsome's letter in your issue of the 28th ult. has surprised me. He says that the preparation of the anti-rabic virus of M. Pasteur does not involve vivisection, and that those who maintain the contrary "can never have witnessed the processes by which they (the antidotes for rabies, diphtheria and smallpox) are obtained."

Now, I have visited the Pasteur Institute in Paris, have been in all the laboratories, and have inspected the building in which are kept the miserable animals who are used for the preparation of the virus for inoculating the patients, some fifty of whom I saw undergoing the process in one morning. I am perfectly familiar with the treatises describing the process of M. Pasteur, and I regularly read the annals of his institute, and I declare that vivisection, a severe cutting operation, and

not "a prick of a needle" business, is an indispensable part of the Pasteurian process.

The prophylactic virus is prepared by boring holes with the trephine (a kind of circular saw), in the skulls of rabbits. A broth made by mixing portions of the spinal cord of rabid animals is then injected beneath the membranes of the living rabbit's brains exposed by the boring operation. This causes the rabbit to become rabid, and in its turn its own spinal cord is employed to prepare more virus. I saw some dozen or more dogs, some of them beautiful and valuable animals, who had been made artificially mad experimentally in M. Pasteur's Institute, and who were kept in strong iron cages like wolves at the "Zoo." Where does Dr. Melsome's "prick of a needle" come in?—I am, sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., etc.

London, March 2nd, 1898.

A CHAPLAIN'S VIEW.

(FROM "THE STAR," LONDON, FEBRUARY 21ST.)

SIR,—I noticed when visiting the sick in a hospital for infectious cases in the discharge of my clerical duties an attack upon your article on the Parliamentary report on vivisection in *The Hospital*, in which complaint was made that your article omitted to notice the comparatively painless character of the inoculations upon living animals. Now, in the same number of *The Hospital* it was stated that it had been found that calculi (stone) could be produced in animals by feeding them on a certain substance, and this without any kind of compunction on the part of the writer of the article. Surely it needs explanation how such shocking and atrocious experiments in giving the most painful diseases to poor creatures, made for our merciful use, but not for our torture, can be complacently quoted, and without a word of reprehension, on one page, and your most proper strictures on the vivisection report censured as though you had been most unduly severe upon that most humane and innocent person, the modern vivisector!

Most heartily do I thank you, in the name of all that is sacred and noble, for your exposure of the immoral methods of "the inquisition of science."—Yours, etc., M.A. (OXFORD).

February 17th.

INOCULATION AND STATISTICS IN INDIA.

(FROM THE "ADVOCATE OF INDIA," BOMBAY, FEBRUARY 12TH.)

SIR,—Some members of the Municipal Council seem to think that statistics must sweep everything before them. Sanitation, medical opinion, commonsense—all must give way to the "fad" of the hour, and so they harp away on one string like all who get possessed with one idea only. Now let us calmly take Professor Haffkine's own words: "At the Umakhadi Jail, out of two hundred prisoners not inoculated, six cases proved fatal out of twelve, three or four of whom did not suffer from plague, although the jail authorities attributed them to plague." So much for statistics, and if this sort of thing occurs in one case, are we to be compelled to swallow all plague statistics as Gospel truth, especially with a population outside a jail or a hospital? If statistical comparisons are to be of any value, then let inoculation stand on its own merits and not be aided by the usual remedies, cleaning and disinfecting, etc. As a rule, the robust and well-fed and well-housed go in for inoculation, and these have in any case a greater chance of escape, and do escape attack. Mr. Shroff the other day told us that all the servants in the Hospital for Animals escaped attack because they were inoculated, but that the *gowlias* outside were attacked. Now whatever is the use of such statistics, for here we have a well-kept disinfected hospital compared with dirty sheds outside? Dr. Chowksey in his report mentions that the greatest number of sufferers in the Arthur Road Hospital were *gowlias* and *syces*,* that is, the people who are most susceptible to plague are those who pay least attention to sanitation and who stint themselves in food. We are told by some of our daily papers that Europeans have not been attacked this year, but some of us know differently, as the plague ward in the European General Hospital can testify. We know, too, that those Europeans who have the misfortune to be living in insanitary quarters near the native town, where unfortunately houses are crowded

* *Gowlias* and *syces* are the milkmen and grooms. They come from North-west Provinces, and to save money to return to their country, live very poorly, most of them only taking one meal a day.

and drains in bad order, are suffering and have suffered. The plague has cost about twenty-two lakhs, which would have been more profitably spent had our City Fathers, instead of boasting of their "Beautiful City," with their eyes towards the Government buildings on the Esplanade (Government buildings, mind you) and their backs towards the swamps, dens, and crowded native town, faced round and tackled their work properly all these long years. But if inoculation is to save us now, what need is there for lament or for the "City of Bombay Improvement Bill"?—Yours, etc.,

February 11th, 1898.

SARAH S. GOSTLING.

THE SCIENCE OF THE LABORATORY.

(FROM "LIFE," NEW YORK, MARCH 3RD.)

Here is an advocate of murder so blinded by the delights of vivisection that he honestly believed he was uttering a moral sentiment.

"The aim of science," says a scientific writer in the *New York Independent* of December, 1895, "is the advancement of human knowledge at any sacrifice of human life. If cats and guinea pigs can be put to any higher use than to advance science we do not know what it is. We do not know of any higher use we can put a man to. . . . A human life is nothing compared to a new fact."

Well, it is a moral sentiment for a vivisector.

All of which goes to prove that the step from torturing animals to killing humans is imperceptible.

Dr. Albert Leffingwell, not one of the "unscientific people," says "the old standards of right and wrong seem to be passing away. The vivisection of animals has been pushed to its utmost limits; there are no new torments to be devised: every conceivable phase of agony has been inflicted again and again."

Kind of looks, brothers, as if this kind of "science" wasn't a safe thing to lean on.

IS THE HOSPITAL SAFE?

(FROM "THE CHRISTIAN," MARCH 17TH.)

SIR,—May I call attention to a serious danger threatening the patients in hospitals? Daily it becomes more clear that the practice of experimenting on living animals leads to experimenting on poor and friendless human beings. And daily it becomes clearer that these latter experiments, so common abroad, are approved by a certain circle in the medical world among us in England.

Quite lately Professor Sanarelli, of Monte Video, gave a lecture, stating how, after a lengthy series of experiments on many animals with yellow fever, he proceeded to carry on the same experiments on poor friendless human beings. He told with pride how these poor creatures had developed all the symptoms of yellow fever, even that of "final collapse" (that means they died), thanks to the "potent poison" he had concocted in his laboratory. One of our English medical papers hailed this as "opening up the possibility of devising new and hopeful methods of treatment"; while another spoke of "the thoroughness, patience, and courage with which the young physician had broken ground in a difficult and dangerous field." This is where experimentation on living animals, *alias* vivisection, is leading us—to the approval of experiments which an American paper, though also greatly sympathising with Professor Sanarelli, nevertheless stigmatises as "scientific murder."

In face of the statement contained in the last report of the inspector of vivisection in England that "the large increase of inoculations and allied experiments which has been noticeable for the last few years is likely to continue"; and considering the attitude of mind which familiarity with experimentation on living animals undoubtedly fosters, it is not too much to say that if we value the safety of the community the sooner we make it illegal for medical men and physiologists in England to indulge in such practices the better it will be for us. No man is so good but that he can be corrupted, and what this work has already done with men's hearts and minds, we see in these yellow fever experiments. Already we hear ominous whispers that even here in England all is not as it should be, but that the vivisectioning laboratories are re-acting on the hospital wards. However this may be, such work as Sanarelli's would not yet be tolerated by the English public. By prohibiting vivisection we shall go far to render it for ever impossible.

C. J. W.

THE ZOOPHILIST.

LONDON, FRIDAY, APRIL 1st, 1898.

MANIFESTO OF THE NATIONAL ANTI-VIVISECTION SOCIETY.

The following has been issued to all the members of the Society:—

TO THE MEMBERS OF THE NATIONAL ANTI-VIVISECTION SOCIETY.

To set at rest certain misapprehensions that have obtained currency it seems desirable clearly to inform the friends of the Cause what are the objects towards which the forces of the National Society will particularly be directed in the immediate future.

The continual increase of vivisection that has marked the last twenty years during which the labours of the Society have been confined to demanding its total abolition, seemed to call for the adoption of less exclusive efforts.

The policy therefore has been initiated, and vigorously will be pursued, of enlarging the Society's activities and of attacking scientific torture in all its forms and by every means in our power.

In the adoption of this policy the demand for total abolition is not withdrawn, and no principle hitherto enforced will be abandoned.

An alteration in tactics only will take place, and the ultimate object in view will remain sacred and unchanged.

Nothing can be done to save animals from torture but by the agency of Parliament, and it is on the urgent advice of an overwhelming majority of the friends of the Cause in Parliament that a change of tactics has been adopted.

To disregard such advice would be foolish; to continue employing the forces of the Society in a manner at variance with such advice would be a waste of its resources, and therefore a betrayal of the true interests of the animals.

It is therefore much to be hoped that all true friends of the Cause, turning a deaf ear to the misrepresentations of prejudice, will give a cordial support to the National Society in its proposed excursions into the arena of practical politics.

With this support we shall go forward on our path unmoved by attacks and undismayed by threats, confident that step by step we shall reach that consummation of our hopes which can in no other way be achieved, and shall at length succeed in securing for all the good creatures of God a lasting and total immunity from all torture whatsoever.

STEPHEN COLERIDGE.

20, Victoria Street, London, S.W.

March 21st, 1898.

PHYSIOLOGISTS AT LOGGERHEADS.

IF the NIZAM OF HYDERABAD had set himself to discover the best way to bring experimentation upon animals into contempt, and make the practice of vivisection ridiculous in the eyes of all but interested persons, he could hardly have devised a more effectual way to attain this end than that which he followed when he instituted the celebrated Hyderabad Chloroform Commission. The *British Medical Journal* of March 5th, 1898, contains an article by Dr. LAUDER BRUNTON entitled "A Reply to Accusations made by Mr. Leonard Hill against the Hyderabad Chloroform Commission."

Dr. LAUDER BRUNTON, we need hardly remind our

readers, is a well-known vivisector at St. Bartholomew's Hospital; for many years he has held a licence to experiment at St. Bartholomew's Medical School; he has held certificates for Illustrations to Lectures; to experiment without using anæsthetics; and a certificate for experiments on "Dogs, Cats, Horses, or Asses." Mr. LEONARD HILL is a lecturer on physiology at the London Hospital; he is also Secretary of the Physiological Society, and, in the words of Dr. BRUNTON, "has already gained for himself a name as a scientific worker." Here, then, are two prominent experimenters at loggerheads, and, as is usual under such circumstances, the quarrel is highly profitable to the spectators thereof.

In the year 1889 a Hindoo Prince, with a taste for Western Science, encouraged certain doctors of Hyderabad to undertake a research into the causes of death by chloroform. During its progress 729 experiments were noticed in the official report. Some new theories had been started in the NIZAM's dominions by Surgeon-Lieutenant-Colonel LAWRIE and others as to the true cause of chloroform fatalities, and after a research in which hundreds of animals had suffered and died, the NIZAM invited Dr. LAUDER BRUNTON to go out to India and investigate further for a fee of £1,000. Dr. BRUNTON went and set to work on another batch of animals, telegraphing from Hyderabad to the *Lancet*, 5th December, 1889, the following message:—"Four hundred and ninety dogs, horses, monkeys, goats, cats, and rabbits used. One hundred and twenty with manometer. All records photographed. Numerous observations on every individual animal. Results most instructive. Danger from chloroform is asphyxia and overdose. None whatever heart direct." Of course the NIZAM was gratified, the great London physiologist pocketed his handsome fee, and the Prince no doubt considered that his munificence had earned him the gratitude of the Western medical world for having settled a long disputed point in physiology. Many of the experiments, on dogs especially, were extremely cruel, as a reference to Appendix C to the report of the Second Commission will prove, and as the result the whole investigation settled nothing. No sooner was the report issued than English physiologists and anæsthetists at our great hospitals began to pick it to pieces. Dr. HEWITT, Lecturer on Anæsthetics at the London Hospital; Dr. BRAINE, Chloroformist to Charing Cross Hospital; Dr. BUXTON, Lecturer on Anæsthetics at University College; Mr. SILK, Anæsthetist to Guy's Hospital, and many other specialists, declared themselves in complete disagreement with Dr. BRUNTON's conclusions.

What is more remarkable is the fact that the agitation against the conclusions of the Indian experimenters has not ceased to this day, and at the moment of writing the quarrel with Dr. BRUNTON has come to a head by reason of Mr. LEONARD HILL's very outspoken criticisms of Dr. BRUNTON's scientific methods. He brings charges against the Hyderabad experiments of (1) prejudice, (2) carelessness, (3) ignorance, and (4) incompetence.

Dr. BRUNTON justly considers these charges as aimed at himself, and does what he can to rebut them. In his defence he says human beings often die from fear and anxiety before the chloroform has had time to allay them, and the members of the Commission "carefully considered whether it was not their duty to attempt experimentally to produce in animals, by causing pain and terror in them, a condition similar to that which may occur in nervous human beings previous to an operation under anæsthetics. They unanimously decided against doing so on the ground that the pain and terror they would have to inflict upon animals in order to produce in them a state at all like that which occurs in exceptionally sensitive human beings would be so great, that they did not feel justified in doing the experiments. In coming to the decision to apply the anæsthetics so as to cause neither pain nor terror to the animals, they were perfectly conscious they were excluding two of the most powerful factors of shock from their experiments, and laying themselves open to the charge which Mr. LEONARD HILL brings against the Commission." This seems to us a very lame excuse indeed. The Appendix to the report of the Second Commission, which was directed by Dr. BRUNTON, says that in nearly every instance the animal "struggled," or "struggled and resisted as usual" (261), or "yelped loudly" (272). Dogs were put into air-tight cases, artificial respiration was resorted to after breathing had stopped so as to revive the animal to undergo fresh experiments; doses of drugs were administered previously to the chloroform, and in some cases the abdomen was opened before artificial respiration had been applied, as in No. 457, when the dog revived. We cannot accept the plea that mercy for the animals restrained the vivisectors' hands at Hyderabad, and we do not believe that the physiologists who are criticizing Dr. BRUNTON's conclusions so severely, will accord him more consideration on this head than we do. Mr. HILL says the Commission "engaged on a wild-goose chase to prove that respiration ceases before the heart fails," whereas their own tracings prove what has always been believed, that heart failure causes the breathing to cease. Mr. HILL declares that Dr. BRUNTON's experiments were "so careless in execution that they could not for one moment be accepted by a trained physiologist." Ignorance of precise physiological methods and incapacity to interpret aright the tracings of the blood pressure are further particulars of Mr. HILL's attack, and when he adds that by the neglect of simple precautions the experiments "were rendered entirely worthless," it will be seen that, in the opinion of the "little pigs" who stayed at home the "pig who went to market" so successfully at Hyderabad earned his thousand pounds greatly to the disgust of those who had none. Dr. BRUNTON apologizes for resorting to strong language, but says he cannot help characterizing his brother vivisector's statements as "absolutely false." It only remained for Mr. HILL to reply "You're another," he contents himself, however, with suggesting that his opponent has perpetrated "a dubious innuendo." It is "a very pretty quarrel as it

stands," and one which shows that a new theory in physiology has its market price, like many other things.

VIVISECTION AT THE BOARD OF AGRICULTURE.

WE published in our last issue some correspondence with the Board of Agriculture and the Home Office on the subject of vivisection under the authority and in connection with the first of these Departments, but we did not comment on the letters at that time because it was intended to bring the matter to a climax by publicly putting a question to Mr. LONG on the subject in the House of Commons. This has since been done, and we print to-day the question and the reply. The history of this matter is a little curious. It does not seem that any special parliamentary sanction had ever been obtained on the votes, but there appeared in the official return under the Act relating to vivisection for 1896, and for the first time, a notification that a laboratory had been set up at the Board of Agriculture, and that two vivisectors were licensed there. The exact entry was "The laboratory attached to the Department of the Board of Agriculture, 4, Whitehall Place, the entrance to which is in Great Scotland Yard." Then the names of the vivisectors were given, namely, ALEXANDER CURTIS COPE, M.R.C.V.S., and WILLIAM DUGUID, F.R.C.V.S. Each of these persons it appeared had been armed with a special certificate for experiments without anæsthetics, but both were returned as having made no experiments. There seemed, therefore, so far to be little to take notice of. On reflection, however, it was concluded that this might be but the thin end of the wedge, and hence, early in the current year, enquiries were set on foot to ascertain whether this laboratory and these men were still there. The correspondence which we published last month showed that they were, and the letter from the HOME SECRETARY further showed that they held more certificates than ever, each man having three. These were A, for experiments without anæsthetics; B, dispensing from the obligation to kill the animal before its recovery from anæsthesia; and F, for experiments on horses, mules, or asses.

Now, both the correspondence and the question in the House elicited that the intention was "to enable the Board of Agriculture to efficiently discharge the duties devolving upon them in relation to rabies in dogs under the Diseases of Animals Act," but what they want with a certificate enabling them in that connection to experiment on horses, mules, or asses, it is difficult to discern. It may not be generally known, although some are familiar with the fact, that hitherto the examination of the bodies of alleged rabid dogs—that is, the application of the Pasteurian test—has been carried out at the Brown Institution, London, and a notice that this would be done has appeared on the back of the dog licenses issued to the public. But now, the Board of Agriculture is taking the matter into its own hands. Whether the change is due to official zeal, or to the pressure of the so-called scientific

party—in other words, the vivisectioning ring—we are unable to say. But this much is certain, that since Mr. VICTOR HORSLEY gave evidence before Mr. LONG's Departmental Committee on the dog laws and the suppression of rabies, the policy recommended by that person seems to have been adopted in almost its entirety. We are therefore strongly of opinion that the Board of Agriculture has been captured by the vivisectioning fraternity. We have heard of personal interviews that have taken place between some of the leading permanent officials and those opposed to the policy of the Department, and we understand that very plain indications were given of the direction in which those officials had set their faces. The matter will not, however, be left to rest where it is. A debate will be raised on the question on the estimates by and bye, and Mr. LONG, who seems to follow rather than to lead in his own office, will have to explain how it is that he has done this thing without first giving the House of Commons an opportunity of pronouncing upon it. Certainly it must and will now pronounce on this new and very objectionable departure, and that very soon, and we trust a determination will be shown to prevent official additions to the experimenting laboratories in London, which already are much too numerous.

THE ATTITUDE OF THE LONDON ANTI-VIVISECTION SOCIETY.

On the 10th of February there appeared in the *Daily News* and other newspapers an announcement that "the Committee of the London Anti-vivisection Society has resolved to introduce two Bills dealing with the question of experiments upon living animals. First, a Measure will be presented to the House of Lords enacting that vivisection shall be totally abolished and prohibited by law. The second Measure is for submission to the House of Commons, and is intended to more effectually restrict experimentation, and to eliminate the abuses which have grown out of the Act of 1876, until such time as the practice is abolished."

So much we quoted in the *Zoophilist* of last month. There was more, however, which we did not quote, as the newspaper paragraph went on to give details, by stating that the Bill "will enact that no animal shall be slaughtered or be experimented upon except in a public place provided for the purpose, and under rigid and constant inspection; that in all cases of experiments the animal shall be fully anæsthetized under some such efficient anæsthetic as ether or chloroform; that the use of curare shall be absolutely prohibited, and that any infringement of the provisions of this Act shall subject the delinquent to imprisonment without the option of a fine."

So far as we have seen no public repudiation or qualification of this definition of the attitude of the London Society has appeared. On the contrary, it was confirmed by the Hon. Secretary of that Society (Miss E. ABNEY-WALKER), who, according to the official minutes, at a meeting of the International Anti-vivisection Council,

held on the 3rd of February, "stated that her Society also contemplated the introduction of two Bills, one for Total Abolition, and one for doing away with the secrecy of laboratories." Further, the London Society issued forms of petition for signature, in which the SECRETARY of STATE was to be asked for improvement in the system of inspection of laboratories, and we have not heard that these have been withdrawn.

Then came, on the 9th of February, the meeting of the Council of the National Society, the decision in favour of "lesser measures," and the announcement that in consequence various large bequests and some subscriptions would be withdrawn. Subsequently to all this, on the 28th of February, the London Society issued a circular, in which it was announced that they would revert to the policy of Total Abolition. The following is a copy of this letter:—

"LONDON ANTI-VIVISECTION SOCIETY,
"32, SACKVILLE STREET, PICCADILLY, LONDON,
"February 28th, 1898.

"THE ZOOPHILIST' AND THE LONDON ANTI-VIVISECTION SOCIETY.

"DEAR SIR OR MADAM,—Having seen a paragraph in 'THE ZOOPHILIST' of March 1st, which is calculated to convey a wrong impression as to what course of action the London Anti-Vivisection Society has now decided to pursue, I have the honour to subjoin a copy of the Resolution passed by my Committee on the 21st of February last, viz. :—

"That this Society frame a Bill for Total Abolition *alone*, to be introduced into both Houses of Parliament"—thus abstaining from introducing any Lesser Measures.

"I am anxious to bring this decision under your notice, as a zealous worker for animals against scientific cruelty, so that you may see the London Anti-Vivisection Society firmly adheres to its principles as a Society which has always worked for the Total Abolition of Vivisection since its foundation in 1876.

"I remain, yours faithfully,
(Signed) "E. E. ABNEY-WALKER, Hon. Sec."

To that letter the Hon. STEPHEN COLERIDGE, Hon. Secretary of the National Society, on his return to town from his circuit, wrote the following reply:—

"THE NATIONAL ANTI-VIVISECTION SOCIETY,
"20, VICTORIA STREET, LONDON, S.W.,
"9th of March, 1898.

"To the Hon. Secretary of the London Anti-Vivisection Society.

"DEAR MADAM,—On my return from circuit in Wales I find your letter of the 28th of February, informing me of the *present* position of your Society. Your Society having announced in the Press that it had resolved to prepare a measure for the House of Commons 'more effectually to restrict experimentation and to eliminate the abuses which it is alleged have grown out of the Act of 1876 until such time as the practice is abolished,' the editor of 'THE ZOOPHILIST' imagined he was best serving the interests of your Society in repeating your announcement in his columns.

"Mr. Lewis also wrote to me to say that the London Society, while not desiring to be unfriendly to the National, could not wait indefinitely if we did not quickly make up our minds in Victoria Street to 'do our duty,' and disregard certain financial threats that he understood were causing us hesitation; and that accordingly 'the London' had instructed

counsel to draw up a Bill on the lines above-quoted from the Press.

"The sudden and remarkable change announced in the circular you are sending out could hardly have been anticipated by the editor of 'THE ZOOPHILIST.'

"It synchronizes happily with the fulfilment of those financial threats that Mr. Lewis told me your Society trusted and hoped we should disregard.

"You may be sure that a change of mind on the part of your Society so fortunately timed will be recognized by all as having its sole origin in a firm adherence to principle.

"I remain, dear Madam, your very faithful servant,

"STEPHEN COLERIDGE, Hon. Secretary."

We add no comment to these facts, but simply leave them to make what impression they may.

ANNUAL MEETINGS.

THE SOUTHPORT LEAGUE.

The annual meeting of this association was held on Thursday, February 24th, in the Assembly Room, Cambridge Hall, under the presidency of Mrs. Taylor. She was supported amongst others by the Rev. Dr. Porter, Councillor T. Hayward, Mr. J. Mulgrew, J.P., Mr. A. S. Thew, Mr. Rees, Miss K. Ryley (hon. sec.), and Miss Smith (hon. treas.), and Colonel Waterston, of Edinburgh.

Miss RYLEY read letters of apology for unavoidable absence from the Rev. T. A. Howard, of Liverpool, and the Rev. T. J. Dickinson. She then submitted the annual report of the League, which showed that the outside public work last year had been less than usual, as from various causes they thought it advisable to refrain for the time from holding public meetings. They had not, however, been apathetic or indifferent to the interests of the society.

Miss SMITH submitted the balance-sheet, showing that the subscriptions for the year amounted to £11 6s. 3d., and a balance in hand of £9 14s.

Mrs. TAYLOR, in moving the adoption of the reports, stated that in the Southport Infirmary it was gratifying to know that vivisection was not practised, and she believed that they had not a single vivisector in the town. That accounted in a measure for the inactivity of the Society during the past year, but in view of the resolution in favour of vivisection passed a short time ago at a public meeting in Southport, it behoved the members of the League to put forth their energies to oppose more actively the principles of that evil practice.

Mr. WALKER seconded the adoption of the reports, which were carried.

On the motion of Councillor T. Hayward, a number of ladies and gentlemen were appointed a committee.

The Rev. Dr. PORTER was unanimously elected president of the League for the ensuing year, and Miss Ryley and Miss Smith were re-elected hon. secretary and hon. treasurer respectively.

Dr. PORTER presided at a public meeting which followed, and at the outset of an introductory address remarked that he had never had much doubt that vivisection was wrong in itself, and therefore he had no hesitation in expressing publicly his antagonism to the practice. He then went on to allude to a letter which he had received from a Southport gentleman (Mr. G. M. Dent) dealing with the question of vivisection. After quoting the resolution passed at the meeting of the St. Philip's Debating Society, the writer stated that in accordance with that resolution he shared with all humane people a deep abhorrence for the wholesale and quite unnecessary pain inflicted on animals by the continental school of vivisectors; and if the practice were carried on in the same unrestricted way in this country he should at once throw in his lot with the anti-vivisectionists. He also stated that a tolerably exhaustive inquiry into the historical facts convinced him that some vivisectional experiments had been of the utmost service to the healing art, and might fairly be credited with a great saving of human life and suffering; that he only approved of such experiments as had for their object some specific benefit to human or animal life; that he was entirely in favour of

the restrictions imposed by the existing Act, a study of which and of the inspector's report for the year 1896, went to show that practically all experiments involving pain were performed under anæsthetics, and that 80 per cent. of the total experiments were of the nature of "inoculations and hypodermic injections;" that motive determined the moral character of an act, and judged by that rule physiologists were not guilty of "immorality" in such experiments; and that the total prohibition of vivisection would not abolish cruelty to animals in every quarter any more than our criminal law stamped out theft and murder. Dr. Porter, in referring to the letter, remarked that supposing that vivisectors could prove that benefits to mankind had resulted from the practice, he was of opinion that their method of obtaining those results was wrong. He could not believe that an all-wise Creator had shut up humanity to one sole way of conquering the citadel of truth, and that a way opposed to tenderness and kindness, the highest elements of human character and Christian principles. If vivisectors could stand up and prove that in the whole resources of science there was no other way of obtaining results beneficial to mankind, he might then admit that there was something in the argument of the writer of the letter. Thousands of experiments had probably been made by the vivisectors, and nobody knew what the benefits had been. If the vivisectors had their way he considered that vivisection in England would be carried out to the same extent as on the continent. Then with regard to the matter of anæsthetics he knew of nothing more strongly against vivisection than the last report of the Government inspector as to what had been done in its interests during the year 1896. It stated that the bulk of the experiments were performed under anæsthetics, and the inspector himself was absolutely forced to admit that the application of anæsthetics was an act of cruelty to the animal, and to state that the process of inoculation was inadequately provided for under the Act of Parliament. If the mere attempt to destroy the sense of pain before the cruel knife was plunged into the quivering body of the animal was cruel, then he (Dr. Porter) contended the whole practice was brutal. Further, it was not performed merely on animals but on human beings, a fact borne out by the report, which stated that inoculation was largely used for diagnosing disease in man as well as in animals. He held that motive did not make an action right. He believed that the promoters of the horrible Inquisition were under the sincere conviction that their actions were right, but their motives, however sincere, did not make their actions just, and free from evil. The practice of vivisection was in itself degrading. How, he asked, could a man who stopped his ears to agonizing cries of tortured creatures, become otherwise than callous? A vivisector might start with the highest motives, but he soon got inured to animal suffering and became callous, and one of the things they as anti-vivisectionists objected to was the performance of those horrible experiments before young students. If the results had been demonstrated once for all why should they familiarize the students with those terrible experiments? It were better to die early and lose life rather than that by countenancing brutality they themselves should become brutal. With regard to the last assertion of the writer of the letter, that the total prohibition of vivisection would not abolish cruelty to animals in every quarter any more than our criminal law stamped out theft and murder, he thought it a very weak argument. Did it follow that because the criminal law did not stamp out theft and murder they should have no law at all? No one, he was convinced, would admit that. And therefore there was no reason in the argument on that ground that vivisection should not be abolished totally by some measure of legislation. (Applause.)

Colonel WATERSTON, at the outset of an eloquent speech, described vivisection as experiments upon living animals in the hope of obtaining something that might be beneficial to mankind—experiments which would be too horrible for them to relate, and which were carried out in a way that was revolting to every real man and woman. He pointed out that one of the greatest vivisectors, Claude Bernard, when asked the question as to what was the result to him as the outcome of that cutting and carving, said that their hands were empty of results. Sir William Thomson said that experiments involving such torture to such a large number of intelligent

animals were not justified, either in respect of the object in view or the results obtained. Surgeon-General Gordon, one of the physicians of Her Majesty the Queen, in referring to vivisection, had said that so far from advancing medicine and surgery, the experiments had been pernicious to the healing art, and in them science had been prostituted. He (the speaker) contended that the divisions that had taken place amongst doctors justified them as anti-vivisectionists in protesting against and in seeking power to abolish the evil practice. He went on to show that chloroform had not been discovered by means of vivisection as has been alleged, and also disproved many other statements as to what has been accomplished by its use. He showed that the construction of the lower animals was altogether different to that of the human being, and any result as the outcome of vivisection on the lower animal could not be reliable as to man. An animal under the influence of an anæsthetic was not in its normal condition, and therefore the diagnosis could not be relied on in the slightest degree. He contended that vivisection which had been tried for a long series of years was a scientific failure and morally wrong, and referred to it as opposed to all Christian principles. In conclusion he proposed the following resolution, which had been drafted by the committee:—"That this meeting deplores the step taken by the National Council at its meeting on the ninth of February, 1898, and it considers that the lower animals can be better protected from the tortures of vivisection by agitation for its total prohibition than by agitation for what is known as 'lesser measures.'"

Mrs. TAYLOR seconded the resolution, and it was carried unanimously.

Votes of thanks to the speakers and to the Chairman brought the meeting to a close.

THE MANCHESTER BRANCH.

The annual meeting of the Manchester Society for the Protection of Animals from Vivisection was held on Thursday, February 24th, in the Memorial Hall, Albert Square. The chair was occupied by Mr. E. N. Molesworth-Hepworth, and on the platform were Mr. R. Somerville Wood (Wimbledon), Dr. F. S. Arnold, Mr. J. W. Graham, and Mr. Herbert Philips.

The fourteenth annual report of the Society was read by Miss RACHEL M. IRWIN, the Secretary. The Committee stated that, as in previous years, the efforts of the Society had been directed to the task of enlightening public opinion as to the practice of vivisection—a practice which was now carried on in England to an enormous and ever-increasing extent. In consequence of the secrecy maintained, and the misrepresentations made to the public with regard to the practice, the work of the movement against it was made very difficult. The vivisectioning clique was a powerful one; it strongly influenced Parliament and the press, and, as a natural sequence, the general public. It was a war, as Miss Frances Power Cobbe said, "against the hosts of science and selfishness," and required all the moral force at command. The fact that vivisection had actually been legalised by Act of Parliament rendered the people of this country responsible for it in a measure which did not apply to other countries. The Committee proceeded to describe the work done by the Manchester Society during the year. In conclusion, they made an urgent appeal to their friends and those who gave their sympathy to the movement for further support, not only in the matter of funds, but by assisting in the distribution of literature and by personal influence in their immediate circles. The object of the movement was to rouse the conscience of the nation against the cruel wrong perpetrated upon animals through vivisection and the moral evils which attended this horrible practice as it was roused against slavery and the slave trade. It was only by creating a decided expression of public opinion that the total prohibition of it could ever be obtained. Sir Walter Besant wrote about another social question:—"The only real and effective way of dealing with any social evil is to get the facts, all we can, and then hammer them and keep on hammering them into people's heads." This was true, and it was only this persevering and persistent course of action which was likely to attain the desired end.

The CHAIRMAN moved the adoption of the report and balance-sheet and the election of officers and members of the Committee for the ensuing year. The object for which they were working, he said, was the total prohibition of

vivisection in this country, and the stopping of the system of licences granted by the Home Secretary to medical men to torture defenceless and innocent animals. That was their work, and it was a work important to animals and important to the community. It was important to the community that their medical men should be of the highest character. How could they be of such character if they went into their laboratories and tortured innocent animals? At first the medical experimenter might be rather horrified at the torture he was inflicting, but later on the fever of investigation seized him, and nothing would stop him. The Society pleaded for greater reverence, greater care. They pleaded that the medical profession, perhaps the most useful, noble, and important part of the community, should join with them in removing this stain and danger from our midst, so that Great Britain might justify her leading position among the nations by setting a wise and right example. (Applause.)

Dr. F. S. ARNOLD, in seconding the resolution, declared that there was a close connection between vivisection of animals and experiments upon human beings. The two things went together. If they utterly neglected and ignored the rights of animals they would most certainly find a very lax standard of morality as regarded the treatment of the poor and friendless in the hospital wards. (Applause.)

The resolution was passed.

Mr. R. SOMERVILLE WOOD moved the following resolution:—"That the cruelties inseparable from the practice of experimenting on living animals leave the friends of animals no alternative but that of demanding total prohibition of vivisection; that pending the growth of public opinion in this direction it is of the utmost importance that the reports of the inspector under the Act (39 and 40 Vict.) should be keenly criticised and discussed in Parliament whenever opportunity offers, either by direct question or in a debate raised in Supply; the members for Manchester are hereby requested to use their influence to promote such discussion in Parliament, with the view of securing to the public the fullest information as to what goes on in the physiological and pathological laboratories in the United Kingdom." Mr. Wood said that while their cause might be despised in some quarters, and while they might be called fanatics, sickly sentimentalists, and so on, yet there were hopeful signs of the growth of their cause in the country. Going about through different parts of the country he could see that the movement was more and more appealing to the national conscience. Mr. Wood entered on a criticism of the Vivisection Act—an Act which, he said, left very much to be desired. The Act contained some good clauses, but unfortunately they were balanced by the bad ones. The Society would accept any instalment of their aims, but their ultimate object was the absolute prohibition of vivisection. He asked the public to help them to suppress this foul abuse and to bring about a greater feeling of loving kindness, mercy, and humanity towards animals, so that in a future day vivisection should be regarded with very much the same horror as we now regarded the tortures inflicted in mediæval days. (Applause.)

Mr. J. W. GRAHAM seconded the resolution, which was passed.

On the motion of Mr. HERBERT PHILIPS, thanks were given to the Chairman.

RETURN OF LECTURES AND MEETINGS.

The following is a return of the lectures and meetings, arranged at the instance of the National Anti-Vivisection Society, which have taken place as stated below:—

Date.	Speakers.	Place of Meeting.
1898.		
Jan. 18	Mr. R. S. Wood	St. Mary Magdalene, Paddington.
" 19	" "	Mutual Improvement Society, Sunbury.
" 23	" "	Wimbledon.
" 26	" "	Rotherhithe.
Feb. 1	Rev. T. Perkins	Cambridge Hall, Southport.
" 2	" "	Imperial Rooms, Cheltenham.
" 4	Mr. R. S. Wood	Baths, Lambeth.
" 7	" "	Fawcett Liberal Club, Notting Hill.
" 8	" "	Individualists' Club, Anderton's Hotel.
" 13	" "	Radical Club, Wimbledon.

Date.	Speakers.	Place of Meeting.
1898.		
Feb. 15	Mr. R. S. Wood	Chelsea.
" 15	" "	Somers Town.
" 15	Dr. Berdoe	All Saints' Mission, Tufnell Park.
" 18	Mr. R. S. Wood	Working Men's Branch, Marylebone.
" 28	" "	Boro' Polytechnic, Borough Road.
" 29	Mr. Benjn. Bryan	Drawing-room Meeting, Sutton, Surrey.
Mar. 3	Mr. R. S. Wood	Radical Club, East Finsbury.
" 7	" "	The Mint Lodge, I.O.G.T., Earl Street, London Road.
" 9	" "	Newington Reform Club, Walworth.
" 10	Rev. T. Perkins	Horwich, Bolton, Lancashire.
" 11	" "	Mrs. Mason's Drawing-room, Leamington.
" 13	Mr. R. S. Wood	Radical Club, Penge.
" 15	" "	Young Men's Institute, Brentwood.
" 21	" "	S.W. Ham Liberal Club, Canning Town.
" 24	" "	St. Philip's School, Avondale Square, Old Kent Road.

THE INQUISITION AND VIVISECTION COMPARED.

The March issue of the *Contemporary Review* contained an article entitled "The Methods of the Inquisition," by Mr. W. S. Lilly, a writer who is well-known as a hearty supporter of our Cause. The concluding paragraphs of the essay contained a comparison between the methods of the Inquisition and those of Vivisection, with, as will be seen, a strong expression of opinion on both. We quote the passages to which we refer, as follows:—

"There is an element of cruelty in all of us. We may all discover within us, if we search carefully enough, that *insani leonis vim* of which Horace speaks. It would be a mistake to suppose that ecclesiastics who discharged Inquisitorial functions must have been abnormally hard-hearted. St. Peter Martyr, their 'egregious captain,' who achieved fame as one of the most relentless exterminators of heresy the world has ever seen, is described in the Bull of his canonisation as being of 'sweet benignity, of exhaustless compassion, of wonderful charity.' There is no sort of reason for questioning the accuracy of the description. No doubt an Inquisitor's sensibility to suffering was blunted by the constant sight of it in the torture chamber. I can the more readily understand that this was so, from the comparative indifference with which, as a young man, I soon came to view the execution of sentences of hanging and flogging, at which it was my duty to be present when an assistant magistrate in India. For myself, I do not hold the person of the Inquisitor in admiration. But we must be just—even to an Inquisitor. And the present age supplies a parallel which may, perhaps, help us to be so. Science is to the Vivisector what orthodoxy was to the Inquisitor. Indeed, I remember a physician, much famed for the ferocity of his feats in physiological laboratories, remarking to me, 'Science is my religion.' Well, this gentleman, for the advance of his religion, did not shrink from causing to multitudes of dogs and horses physical sufferings as intense as any Inquisitor ever inflicted on heretics or suspected heretics. But it may be said, 'The Vivisector's victims are animals lower than man in the scale of being; the Inquisitor's were men.' Of course, that is, as a rule, true. The Vivisector is obliged—at all events usually—to content himself with animals lower than man, in default of the human subjects upon whom, if his experiments are to possess any real scientific value, they should be performed. And, of course, every metaphysician knows that rights cannot, in the strict sense, be predicated of the lower animals, who are not *persons*. But if not persons, they assuredly are not mere things. They possess what Trendelenburg calls *ein Stück persönliches*. They are 'our poor relations.' Hence, as it appears to me, to torture them is much more cowardly than to torture men. Anyhow, torture is torture, and familiarity with it engenders callousness concerning it—nay, too often, a taste for it. The Vivisector is, to say the least, as indifferent to the sufferings of his victims as was the Inquisitor. Curiosity as to the attainment of the desired result, not pity, is the emotion

produced in his mind by the agonies and cries which, like the Officials of the Holy Office, he carefully, perhaps complacently, notes. We are not justified in attributing to him, any more than to the Inquisitor, abnormal hard-heartedness. But, like the Inquisitor, he illustrates a tendency in human nature to shrink from no savagery towards others *ad eruendam veritatem*—in the attempt to elicit truth. That tendency I, for one, hold to be evil in itself. The doctrine, so ignorantly imputed to certain schools of casuists, that a good end will justify any means, is simply false, and inconsistent with the first principles of morals. We have no right to employ physical torture in order to elicit truth, whether in judicial or scientific investigation. It is an unethical means; and that is the true objection to it in both cases."

OUR CAUSE IN PARLIAMENT.

EXPERIMENTS AT THE BOARD OF AGRICULTURE.

In the House of Commons on the first of March, Sir CHARLES DILKE (who had kindly undertaken the duty at the request of the National Anti-Vivisection Society) asked the President of the Board of Agriculture whether a laboratory for experiments on living animals had been opened in connection with the Board of Agriculture, and two officers empowered to perform experiments without anæsthetics; whether any experiments made there with regard to rabies would be at the public expense, and whether there was any provision for the laboratory in the Estimates?

Mr. LONG: It has recently become necessary in connection with our operations against rabies for our Veterinary Department to take over from the local authorities the duty of diagnosis, where the local inspector is unable, after *post-mortem* examination, to express a definite opinion as to whether the animal was or was not rabid—a class of cases in which inoculation experiments have always been necessary. The work will be performed under the authority of licences under the Act of 1876, which, for many years past, it has been requisite should be held in the Department in question for the purposes of the Diseases of Animals Acts. All the expenses which the work entails are provided in the vote for my Department.

PHYSIOLOGICAL TEXT-BOOKS IN THE LONDON BOARD SCHOOLS.

On Tuesday, February 22nd, Mr. SAMUEL SMITH asked the Vice-president of the Committee of Council on Education whether the Education Department had sanctioned the use of text-books in the London Board Schools with regard to vivisection in which painful experiments on living animals and their results were described in detail without stating that such experiments were in any way exceptional?—Sir JOHN GORST replied that the Education Department did not sanction text-books used in elementary schools, but it had power to disallow any book that was considered unsuitable. The text-book referred to in the question would be obtained, and the question whether its contents were suitable for the instruction of children considered.

CORRESPONDENCE.

LEWIS CARROLL AND VIVISECTION.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Will you allow me to point out, as a fact which has possibly escaped your attention—at least I have seen no reference to it in your obituary columns—that the delightful writer who adopted the pen-name of "Lewis Carroll," and whose recent death the entire English-speaking world has been lamenting, was a strong opponent of Vivisection, though perhaps he never formally attached himself to any Anti-vivisection Society. Many will recall the trenchant verses in "Phantasmagoria," called "Fame's Penny Trumpet," but I wish especially to draw attention to a paper which Mr. Dodgson contributed to the *Fortnightly* of June, 1875, when that review was edited by Mr. John Morley—"Some Popular Fallacies about Vivisection." In this essay many of those miserable apologies for argument brought forward by the

vivisectors and their friends, and with which we are all familiar, are marshalled in succession and confuted in a manner which can only be described as masterly. In the stirring period in which it was written, between the appointment of the Royal Commission and the passing of the Act of 1876, this short and telling paper can hardly have failed to influence many minds; and it is a pity that so admirably effective a contribution to the cause of justice and mercy, and so scathing a condemnation of the scientific torture of animals, is buried in an old volume of a review, for it has, I think, never been reprinted.—Your faithful servant,

C. E. TYRER.

Brasenose Club, Manchester, February 21st, 1898.

PROF. ALLEN AND THE PASTEUR INSTITUTE.

TO THE EDITOR OF "THE ZOOPHILIST."

SIR,—Allow me to point out that if the facts were correctly reported the dog that bit Prof. Allen does not seem to have been mad at all. Prof. Allen's attention seems to have been directed to the peculiar conduct of the dog, who took refuge in his garden from some children who were following it. As the dog did not bite any of the children it seems very improbable it was rabid, and certainly it was quite natural it should bite the Professor, who laid hold of it. It was, no doubt, duly certified to be rabid by a veterinary after a *post-mortem*, but while the value of the inoculation test seems to be a point on which scientists differ, it appears to be generally admitted that ordinary *post-mortems* are quite inconclusive.—Yours faithfully,

F. CARPENTER.

FOREIGN INTELLIGENCE.

UNITED STATES.

BALTIMORE AND VIVISECTION.

We take the following from *Our Dumb Animals* (Boston Mass.), for February :—"A kind friend sends to our 'American Humane Education Society' a check for 100 dollars and an article cut from the *New York Tribune*, of December 24th, showing that Cardinal Gibbons (Roman Catholic) and Bishop Paret (Protestant), of Baltimore, are both taking a warm interest in the organization of the Maryland Anti-Vivisection Society, which will make efforts to stop the terrible cruelties inflicted by vivisection in Johns Hopkins University and its Medical School and Hospital. The article states that 'Baltimore is the hot-bed of vivisection and is so regarded all over the country.'"

GERMANY.

THE FREIBURG SOCIETY.

The Freiburg Society for the Protection of Animals (A.V.) held its annual meeting on the 8th of February last. The activity of the Society during the year 1897 has been very marked, and the meeting was largely attended. The President reported the result of the memorial which had been presented to the Town Council in respect of certain abuses in connection with the town slaughter-house, the transport of poultry, the treatment of frogs, etc., also the concessions granted in response to the Society's appeals. Further, 103 cases of cruelty reported by the police had been punished by fine and imprisonment. The lethal apparatus had destroyed painlessly several hundreds of stray dogs and cats. Large dogs had been shot by the Society's officer, or by the town official appointed for this purpose, in his presence. Fifteen hundred calendars had been presented to the children in the Black Forest. Hints for the care of horses and the protection of birds had been freely distributed. Eight draught dogs had received covers and mats. Cab-owners who had dispensed with bearing-reins had been presented with horse blankets and their cabs specially recommended to members. The Society is in hearty sympathy with the World's League against vivisection, and expresses the hope that this noble organization may at last be successful in the long struggle against the hideous cruelties of misdirected science; and also supports the International Women's League against the wholesale slaughter of birds. Owing to the prospect of

substantial legacies from its foundresses, two Scottish ladies, and from other members in Freiburg, the Society is now enabled to claim corporate rights from the Ministry. The members number 350, and the Committee consists of Drs. Riedlin and von Langsdorff, Miss Stähelin, hon. secretary, Mr. Schnider (architect), treasurer, also Mrs. Riedlin, Baron von Fahrenberg, Professor Ruttinger, and Mr. Oettinger (schoolmaster).

THE WORLD'S LEAGUE.

We learn from the *Thier und Menschenfreund* that the Berlin Branch of the World's League against vivisection continues to be very active in keeping the cause well before the public by means of discussions in the Press and the distribution of leaflets. It has also addressed the following questions to the Prussian Minister of Education :—

I. Is vivisection practised in all the Prussian Colleges; which experiments are performed in private, and which as part of the college curriculum and before the eyes of the students?

II. Are all professors, teachers, and students of medicine in the State institutions officially authorized to perform experiments, or only certain persons; in the latter case can a list of these persons be obtained?

III. Are there official regulations stating the principles which must govern the practice of vivisection; and if so, in what manner are the regulations brought to the notice of the professors, etc., and in what way is the official control exercised?

IV. What classes of animals are used for the experiments, and how many animals are sacrificed yearly in institutions supported by the State; in what way are the animals obtained?

V. What are the definite and practical results from vivisection, which have been obtained for the people as regards the progress and improvement of the art of healing; is the distinct object or purpose of an experiment stated, and the experiment after due consideration officially authorized, or does each vivisectioner do just as he pleases?

VI. What are the amounts granted by the State for the purpose of obtaining apparatus, instruments, etc., and for the purchase of animals?

RUSSIA.

We read in the *Anwalt der Thiere* that Frau Mary von Schilling of Riga, who for thirteen years has edited the journal, has received from the Turin S.P.C.A. a gold medal, and a diploma of honour in recognition of her literary services to the cause.

The same journal quotes the following from the Riga Daily Paper :—"Diphtheria in St. Petersburg during the last ten years has shown a great tendency to increase, and this in spite of, or possibly in consequence of the use of the all-healing serum. The numbers are, during 1886, 859 cases and 420 deaths; during 1896, 4,374 cases and 967 deaths; and during the first nine months only of 1897, 4,889 cases and 1,366 deaths."

PHILADELPHIA.

THE AMERICAN ANTI-VIVISECTION SOCIETY.

In our issue of a month ago we briefly announced the holding of the annual meeting of the American Anti-Vivisection Society at Philadelphia on the 28th of January. We have since received the *Journal of Zoophily* for February, with a supplement containing full reports of the speeches made on the occasion. In the following,

DR. MATTHEW WOODS, THE PRESIDENT, SURVEYS THE SITUATION :

In introducing our first speaker, it may be well to remember that the anti-vivisection movement, at present being felt in every land where experimental torture is practised, is different in one important particular from nearly all the movements that from small beginnings grew into mighty forces great enough to move the world.

Most of the other reforms, although led by but a few serious men who saw in advance of their day, in the beginning attracted chiefly the common people, simple people with susceptible emotional natures; the ranks of the leaders were recruited from the easily impressed, and it was only when the original handful had grown into a multitude that they began to compel the recognition of the influential and esteemed.

Many of you remember the experience of the early abolitionists who denounced amid howls and jeers the traffic in human flesh, and who, in the teeth of opposition, continued the struggle against odds, until the common people were aroused when the great reform was really inaugurated, and the work was as good as done.

Most of us remember when a few thoughtful men and women proposed the propriety and possibility of women being physicians. You remember the universal howl of opposition that was raised in consequence of this; how hands were held up in holy horror, and in certain quarters social demoralization was predicted as the positive consequence of permitting women to take scientific care of the sick.

You remember what peculiar-looking people the first women medical students were,—mostly eccentrics, people who had failed to make an impression in other ways, fantastic females with trousers and short hair; how unfit many of them were for the profession for which they studied,—yet the leaders of the movement, convinced that the theory was right, continued, in the teeth of opposition, until now the world recognizes the wisdom of that formerly unpopular movement; and, as a consequence, instead of the women's branch of the profession being made up of masculine nondescripts with the addition of bloomers and ignorance, the woman physician of to-day is usually a quiet person of culture and refinement, with all the finer feminine instincts intact.

The calm, thoughtful people of the world, as far as they understand the subject, are with us in opposing it. There is hardly an intellect that has influenced thought in America that is not on our side. Thoreau, Emerson, Longfellow, Lowell, Phillips, Brooks, Whittier, were anti-vivisectionists, and, indeed, we might claim the whole army of active workers in the literary life of the country as fighting with us under the same banner in this holy war, while in conservative England not only much of the culture, but of the wealth, literary ability, aristocracy, and religion, are united in opposing the right of man to torture animals.

The Catholic, Cardinal Manning, to the end of his career continued with tongue and pen to denounce as extreme wickedness the cruel things done by experimenters, while some of the greatest men among the learned clergymen of the English dissenting churches are active members of the mother anti-vivisection society. Ruskin, Tennyson, Browning, James Payn, as well as many well-known medical teachers, are in favour of its abolition.

If we had time to look into the origin of most of the great reforms, we would find thus that the illiterate, eccentric, fantastic, and emotional occupied a conspicuous place in the ranks, and that their presence, perhaps, retarded the progress of the movement by deterring better people, and antagonizing those who esteem mere propriety. The Anti-Vivisection Society is different. From the beginning it has attracted the sympathy of the people who think deeply. By the very complexity of its nature excluded from the comprehension of those unwilling to investigate, vivisection has been a sealed letter not only to the multitude, but even to the rank and file of the medical profession itself, which is completely ignorant of the appalling things done in the name of science within its own borders.

BOMBAY.

THE PLAGUE INOCULATIONS.

An Indian correspondent writing under date of the 4th of March, sends us the *Times of India* for the 2nd ult., and remarks that it contains extracts from Dr. Haffkine's report of inoculations for the plague, which shows that inoculated people "died at Damaun of the worst symptoms of plague in 8, 10, 12, 13, 15, 26, 30, 45 days after inoculation, and in one house of seven people (page 33) the only attack of plague and death was the inoculated man!" This is the first time that this side of the question has ever got into the papers. The excuse that deaths occur after inoculation is because "only people from badly affected or threatened localities present themselves for inoculation." This is absolutely false, as these are the very people *who won't* be inoculated. It is the well-to-do who not only get inoculated, but go away for a change, taking all their families with them. This has been the case with the Parsees, particularly in Bombay, and the poor Parsees

living in crowded, dirty, horrible places are not inoculated, and they are being attacked greatly, not because they have not been inoculated; but because they are living crowded up in filthy places and ill-ventilated houses. It seems that Haffkine is not using the prophylactic remedy he at first used, but is resorting to serum derived from animals—and my belief is that it *has* always been done—as there were always three and four dead rabbits in the stable whenever my husband went to his servants' quarters on plague search duty. I was told by a medical friend that Haffkine was using the blood of animals now; and he got it on good authority from a scientist who is a great believer in inoculation, and was agent for the prepared prophylactic, which I suppose he was unable to dispose of to Haffkine, as Haffkine had gone back to preparing it from the blood of animals.

PROGRESS OF THE "EXPERIMENT."

The same issue of the *Times of India* as that above referred to contained a very able letter signed, "Æsculapuis Minor," in which the position of the Haffkine inoculations was trenchantly reviewed. We make the following extracts:—

"Until the other day, nobody, I think, would have ventured to contest that, in a question of medical treatment, whether curative or preventive, the safest guide for the public to follow is the advice of medical men. Others have not the mental training, nor the historic retrospect of so many melancholy failures that places doctors instinctively on guard against being rushed by specious nostrums. No science has been touched so frequently as theirs by the warning hand of disastrous experiences not to surrender lightly the public health to the ordeal of half-tried experiments. I hope M. Haffkine's mind is of too scientific a bent to betray him into the belief that the stage of his experiments is over, and that the last word about their triumph has been said. Anyhow as the last word, after all, rests with the only tribunal of appeal, the medical profession, it will remove, I am sure, a great deal of misunderstanding if I place before your readers what, so far as I have been able to gather, is the attitude of my profession with regard to it. Nothing would have induced me to depart from the position of silent watchful interest which becomes the progress of a great experiment, were it not that determined efforts have recently been made by influential gentlemen at large to prematurely boom what may or may not turn out to be a tremendous mercy; to lead public opinion astray as to the stage of demonstration it has reached, and to nag and harass every authority into a blind and wholesale trustfulness in it, and an equally blind abandonment of disinfection and segregation—principles, namely, on which important epidemics in every civilised country still continue to be fought.

"The first thing that greets us in this new departure is the cry: *Look at the statistics!* Sir, the field of medicine, alas! is strewn all over with the abandoned bones of statistical *fiascoes*. The most statistic-ridden people on the face of the earth are we doctors. Our tables are littered with statistics—always statistics. Messrs. Kemp will give any caller a pile of medical pamphlets, and be glad to get rid of them, crammed with statistics regarding the unquestionable value of this, that, or the other drug. They are all panaceas, or nearly all, and yet the least of them has, perhaps, just sufficient efficacy to save the reputation of its introducers for honesty and no more. Statistics, of course, we must have. There is no getting on without them, but they vary in quality more than might seem possible in mere figures, and this variant of private enthusiasm and inscrutable circumambient influences, where the argument is of a negative kind, the man in the street is unqualified by his pursuits from appreciating. Statistics have an atmosphere. It favours the scent towards the genuine article, and even comparatively few figures if suffused with the proper environment will often draw the whole profession where other statistics in the nude, piled up mountains high, will hardly raise a yawn. One thing is certain. When statistics are expected to stand in the place of every other demonstration, doctors will insist on getting them in plenty, and, so to speak, above proof."

* * * * *

"Dr. Yersin, I presume, was sent for on the strength of his statistics. There seems to be a tacit understanding—possibly most unjust to this gentleman's figures—to forget them altogether now. My point therefore is this: If so great a man as Koch was capable, and apparently more than once, of deluding himself and the world into accepting what science on further trial has definitely repudiated, I, surely, am not laying a sacrilegious hand on M. Haffkine if I suggest the possibility of delusional statistics now. The position of reserve which I uphold is a totally different thing from hostility, which I have been nowhere able to discover, and this intelligible position is perfectly illustrated by the homely old apophthegm, 'once bitten, twice afraid.'"

The National Anti-Vivisection Society.

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Those who sympathise with this object are most earnestly entreated to afford the Society all the help in their power, by subscribing, and inducing others to subscribe, liberally to its funds; by obtaining signatures to Petitions to Parliament; and also by disseminating the publications of the Society, and especially its organ THE ZOOPHILIST, wherein the latest information respecting the Anti-vivisection agitation is to be found.

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