

disinfection as may be considered necessary by the superintendent of quarantine. 2. All infected ships, that is to say, those on which any certain or suspected case of cholera has occurred during the voyage, whatever its duration, must undergo strict quarantine. This quarantine shall be performed at the port of Larnaca. This quarantine for persons is seven full days from the date of their isolation in the lazaret, and may be extended to ten days if considered necessary by the superintendent of quarantine. Susceptible goods, passengers' luggage, etc., shall be landed in quarantine and submitted to such processes of disinfection as may be considered necessary by the superintendent of quarantine. Non-susceptible merchandise shall not be landed until after the expiration of the quarantine. 3. All vessels arriving in Cyprus from Egyptian ports with clean bills of health, and which have not had any suspicious case on board during the voyage, must submit to a medical inspection. Free pratique shall only be given if the report of the visit is satisfactory. If the report should be unsatisfactory, the vessel must undergo the quarantine regulations laid down in paragraphs 1 and 2 of this order, as the case requires. This order bears date and has effect from the 15th day of October 1881, inclusive."

We hear, from our correspondent at Nicosia, that a good lazaretto now exists at Larnaca, which is said to be one of the most comfortable in the East. The reported occurrence of fever in July and August was very partial, and which he attributes to the following cause.

On the 25th of July, a very heavy downpour of rain occurred in a limited area, extending from a few miles west of Nicosia to an undetermined point to the east of that town, within and including a portion of the Famagusta district; to the north, it was bounded by the Kyrema range; and, to the south, the rain fell in a decreasing ratio to the coast, at Larnaca only one-fiftieth of an inch being registered. Immediately after this downfall, the maximum temperature, with one or two slight alternations, increased steadily from 91.8° on July 25th, to 111° on August 28th. It was in the area defined above, and during the time noted, that the outbreak occurred; and he believes there can be no doubt but that it was caused by the malaria developed by the action of great heat in a soil impregnated with decayed vegetable and other organic matters that had been subjected to thorough soaking with rain. The fever was of ordinary quotidian type, yielding very readily to the action of quinine; its prevalence throughout the infected district was very great, the inhabitants of whole villages being down at once; at Nicosia, he believes, fully four-fifths of the population suffered more or less from it. The natives themselves say that the heat was greater, and the fever more prevalent, than any year since 1866, the last cholera year here. As far as could be ascertained, not very many deaths occurred from the fever, except amongst young children. The death-rate of Nicosia, however, for August, being at an annual ratio of over 45 per 1,000; of course, in a small population like Nicosia, this is more or less fallacious; still, the increase was very marked. Vaccination, he says, has gone on very satisfactorily this year up to the present time; a considerable number more vaccinations have been performed than were done during the whole of last year; and, as vaccination is not compulsory, there are considerable difficulties to be overcome, notably the apathy of the people; most of them recognise the value of vaccination.

OBITUARY.

WILLIAM HINDS, M.D., BIRMINGHAM.

WE regret to record the death of Dr. William Hinds of Birmingham. Born in 1811, he pursued his medical studies at the Queen's College and Queen's Hospital in his native town, taking the diploma of M.R.C.S. in 1844, and graduating as a Doctor of Medicine in King's College, Aberdeen, three years afterwards. For upwards of twenty-five years, holding office up to his death, Dr. Hinds filled the professorship of botany in his Alma Mater. In this position, he discharged his duties with unvarying diligence and efficiency. Many of our readers will remember the weekly rambles of his class, under his cheery guidance, in the beautiful Warwickshire lanes. For many years, Dr. Hinds held the post of secretary to the medical professors of Queen's College; in this capacity, he was practically dean of the school; and he exhibited in all his relationships with his colleagues and with students a kindly urbanity and an unflinching devotion to the work and welfare of the College. On the 4th of October, he was present at the opening of the winter session of his school, and took part, as usual, in the distribution of prizes. He then looked in his wonted health, appearing younger than his years; a few days afterwards, he exhibited some apoplectic symptoms, and died on the 18th of the month. Besides his collegiate appointments, Dr. Hinds was at one time lecturer on botanical science in the Midland Institute. He was also formerly a medical officer to the now abolished Town Infirmary. Many years ago, he published an ambitious book on *The Harmonies of Physical Science in relation to the Higher Sentiments*; and he contributed papers on pericarditis and other subjects to the medical papers.

PRESENTATION TO MR. GODART.—On Friday, November 11th, a testimonial was presented to Mr. Thomas Godart, late librarian to St. Bartholomew's Hospital Medical School. The testimonial, which consisted of a purse of eighty guineas, accompanied by an illuminated address, was presented to Mr. Godart by Mr. Savory, senior surgeon to the hospital, and the only member of the present staff who has been connected with the institution longer than Mr. Godart himself. The testimonial was subscribed to by both the surgical and medical staff, and by numerous students, both past and present. Mr. Godart acknowledged in the warmest terms his sense of the kindness conferred on him, and the meeting dispersed after a vote of thanks to Mr. Savory for presiding.

THE CHARGE AGAINST PROFESSOR FERRIER UNDER THE VIVISECTION ACT: DISMISSAL OF THE SUMMONS.

As we last week intimated, the executive of the British Medical Association did not think it right that Dr. Ferrier should be left to meet the attack made upon him in this matter without such support as should absolve him from liability to costs, and should indicate the sentiment, which is undoubtedly universal throughout the profession, that he has been made the victim of an attack which aims at the whole body of physicians and physiologists through him. Having ascertained that Professor Ferrier was, in fact, guiltless of any proceeding in contravention of the law, they therefore instructed their solicitor to undertake the defence on behalf of the Association, which, it will be seen, has resulted in the dismissal of the summons obtained by the *ex parte* statement of counsel. It is an additional injury, and affords serious ground of complaint, that such erroneous statements should have been publicly made, in the absence of the person unjustly charged, and that obloquy should have been cast upon an eminent practising physician, and a false charge hurled against him with the utmost publicity, a fortnight before the case was heard, without notice to him, and when he could not vindicate himself. The charge has been fully refuted, but the hardship of the course pursued is only the more apparent. The following is a report of the proceedings.

On Thursday, at Bow Street, Professor Ferrier appeared before Sir James Ingham in answer to a summons charging him with a violation of the Vivisection Act. Mr. Waddy, Q.C., Mr. Besley, and the Hon. Bernard Coleridge appeared for the prosecution; and Mr. Gully, Q.C., and Mr. Houghton, instructed by Mr. Upton on behalf of the British Medical Association, appeared for the defendant.

On the case being called on,

Sir JAMES INGHAM said: This may be a convenient time to inform the defendant that he is not obliged to be tried by me unless he likes. If he thinks proper, he may be tried by a jury. It may be convenient for him to know that.

Mr. GULLY: I understand that the defendant is desirous of being tried here.

Sir JAMES INGHAM: Very well.

Mr. WADDY: I appear, Sir, before you in support of the summons. Although, a fortnight ago I addressed to you some observations upon the question of law, it may be convenient, in order that my friend Mr. Gully and myself should know exactly where we are in regard to it, that I should briefly indicate what it is we propose to prove. The statute under which the summons is taken out, and which we say Dr. Ferrier has violated, is the 39 and 40 Vic., cap. 77. The Act, I think I am justified in saying, was passed in favour of the medical profession and in the interests of science; and I do not say that Dr. Ferrier has done anything which, if he had taken the precaution of having a certificate, he would not have been perfectly justified in doing. By the provisions of the Act, no experiments can be performed except by persons who are licensed. The experiments are to be performed in a certain way; but the restrictions upon the license, and upon certain modes of performance of the experiments, may be removed by obtaining a certificate. I am not going to allege that Dr. Ferrier performed the operation in question; I do not know that he did; but that is not the question we are upon. The question we are upon now is whether or not the operation was the beginning of the experiment performed six months before the time of which I speak, and whether the victims—or as that may be an offensive term, I will say the subjects—of the initial part of the experiment were kept alive by Dr. Ferrier for the purpose of experiments being performed upon them in contravention of the 4th sub-section of section 3: "The animal must, if the pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury have been inflicted on the animal, be killed before it has recovered from the influence of the anæsthetic which has been administered." That, I apprehend, is clearly within the summons, which states that Dr. Ferrier has performed experiments in violation of the restrictions imposed by the law. What we say is this. The statute has carefully provided that there shall be no real restriction upon the performance of all experiments that are necessary in the interests of science and humanity; but in order to take care that these experiments shall not be performed by persons of undisciplined minds, or merely for the sake of curiosity, not for the sake of science, of which I have no doubt Dr. Ferrier is seeking to advance the interests.

Mr. GULLY: Do I understand that the charge made here to-day is, not that Dr. Ferrier performed an operation upon animals calculated to give pain, but that, having performed such operation, he did not destroy the animals?

Mr. WADDY: Practically it amounts to that.

Mr. GULLY: I say, in all good faith, that I have not the slightest intention of taking any technical objection, but that is not the charge that I understood from this summons, nor you, I think, sir, when you granted the summons. It involves a class of evidence with which I daresay I might at short notice be prepared to deal, but it is not evidence to which we have addressed ourselves in meeting this summons. We came prepared to meet the charge that an experiment had been performed, but this charge is a different one.

Sir JAMES INGHAM: I think it will be more convenient that I should hear the full statement of the learned counsel, with such evidence as he thinks proper to adduce before me, and then to decide any question which you may raise upon the evidence. I do not know how the learned counsel means to define the word "experiment". It may be that an actual vivisection has been performed as part of an experiment. Does he mean to contend that an experiment begins and ends with the surgical operation, or does he mean to contend that the experiment is continued over such a reasonable space of time as may attain the object for which the vivisection has been performed? Perhaps he will tell us what his idea is of the word "experiment", because I think that goes to the whole root of the question.

Mr. GULLY: If I have misapprehended my learned friend, I beg his pardon. I understood him to say—he will correct me if I am wrong—that he was rather addressing himself to the words of the proviso of the third section. The third proviso says: "Experiments may be performed without the person who performs such experiments being under an obligation to cause the animal on which any such experiment is performed to be killed before it recovers from the influence of the anæsthetic, on such certificate being given as in this Act mentioned." I understand my friend to say that the charge which he comes to substantiate to-day is, that there has been a breach of the proviso—animals having been kept alive without a certificate under that proviso.

Sir JAMES INGHAM: If you read a little further, I think it will throw certain light upon the general question. "That the so killing the animal would necessarily frustrate the object of the experiment." The Act of Parliament, therefore, seems to contemplate two things—the experiment and the object of the experiment. I want both the learned counsel, before the case is closed, to give me their view of the meaning of the word "experiment". I collect from the statement, so far as that has gone, that the surgical operation was performed more than six months before this summons was taken out. You are aware that there is a restriction on the power of the magistrate. No information or summons can be laid before a magistrate after the expiration of six months from the offence which is charged. If, therefore, the offence with which Dr. Ferrier is now charged was completed before the 3rd of May last, I have no power in this case. If the surgical operation was only part of the experiment—if the experiment itself continued for a longer time—then I may have power.

Mr. GULLY: I quite see that the course which you, sir, propose is a reasonable one, but I thought that my friend was not proposing to do what you suggest.

Sir JAMES INGHAM: I presume it will appear, from the evidence brought before me, that the experiment, as defined by the Act of Parliament, was continuing within a period of six months from the time of the summons being taken out.

Mr. WADDY: I endeavoured on the last occasion to lay stress upon the very distinction which you have been good enough to take, and to which I will try to draw the attention of my friend. I will meet the thing as plainly as I know how to do it. If the statute does not cover the ground it is intended to cover, it is of no use to quarrel with it, but we must seek to have it amended elsewhere; but, if it does cover it, it covers it by virtue of the word "experiment". I will admit as candidly as possible that, unless I can establish that there has been an experiment performed within six months of the date of the summons, I must fail. With regard to the original cutting or wounding of the animal in question, as far as I know anything at all about it, that was probably six months before. I hope it will not be understood that I am making any suggestion of fraud on Dr. Ferrier's part, but I wish to put forward this illustration. Suppose a man chose deliberately to commit an offence of this kind, and then, in breach of this Act, to keep the animal and say, "Because you never found me out within six months, therefore you cannot punish me for the breach of this Act, because it is not an experiment", then I say the Act would become entirely a dead letter. Section 3 says: "The following restrictions are imposed by this Act with respect to the performance on any living

animal of an experiment calculated to give pain"; and then, subsequently, it is extended to the infliction of "any serious injury". Of course, you might have a case in which an animal suffered great pain at one time, which afterwards passed away; but still, such an injury might be inflicted as to make it a cruelty to keep the animal alive. I say an experiment is, or may be, of two kinds. It may be an experiment to ascertain an immediate and already existing fact; and in that case the experiment is done, and you may kill the animal before the effect of the anæsthetic ceases. Or it may be that the experiment is not to discover some existing fact, but to discover the result of a certain operation. I will not go into the moral grounds of the matter, but I believe the justification set up is something of this kind: "If I observe for a considerable length of time the result of certain injuries inflicted upon certain organs of the brain, arguing backwards, in the case of a human being, if I find those results existing, I shall be able to diagnose that the injury is in certain organs; but if I am to ascertain that, it is of no use to limit me to the making of a single experiment, which is all over in half an hour; that will tell me nothing. My experiments may last for weeks, or months, or years, and if I am to be limited to the time when the animal is under the influence of anæsthetics, I shall be doing nothing for science, and my hands will be tied." Now, the Act says that is a perfectly reasonable proposition. It says it is a sad thing that pain or injury should be inflicted upon the animal, and that it would be totally unjustifiable unless some good result happened; but if this good result is to happen, you may get a certificate which will enable you to continue your experiments as long as, in the interest of science, it may be considered necessary. You must, however, get a certificate from certain persons, who, from their official position, are known to the Government, and are believed in and trusted, and properly trusted—namely, the President of the Royal Society, and other well-known persons. But then, lest they should be in any degree biased, the certificate so obtained is to be forwarded by the applicant to the Secretary of State, and it is not to be available until a week after it has been so forwarded. Then if, during the week, the Secretary of State, observing what the operation is, and thinking that it is a wrong thing to allow, disallows it, of course the certificate is gone; but, if he do not disallow it, the certificate remains, and, during the whole of the experiment so continuing, the person performing it is protected by statute. The words of the third section are, "The following restrictions are imposed by this Act with respect to the performance on any living animal of an experiment calculated to give pain." The experiments are to be performed in a certain way; and it is provided in the third subsection that the animal must, during the whole of the period of the experiment, be it a week, or a month, or a year, be under the influence of some anæsthetic. That, of course, would be absurd in the case of a long period, and therefore any scientific man would say, "I cannot do it." Then the Act says: "The animal must, if the pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anæsthetic." But then there are the provisos, and every one of them is to be read into the section of the Act. It will be observed that the whole of the subsections are not distinct and alternative, but are cumulative. All these things must be done, and the only exception is this: "The experiments may be performed without the person who performed such experiments being under obligation to cause the animal on which any such experiment is performed to be killed before it recovers from the influence of the anæsthetic, on such certificate being given, as in this Act mentioned, that the so killing the animal would necessarily frustrate the object of the experiment." In this case, the experiment was the removal of the brains of monkeys, one or more, then the careful observation from day to day of the subsequent lives of those monkeys. I believe I am right in saying that there was no benefit to science whatever to be obtained by Dr. Ferrier in this particular instance by the removal of the brains of the monkeys, seeing that the operation was under anæsthetics. The experiment, properly speaking, began after the monkeys awoke, and, under those circumstances, the killing of the animals would necessarily frustrate the object of the experiment. What is the object of the experiment? I read in certain documents, which I shall have to lay before you, that there are certain motor and sensory areas, and the object is to ascertain the effect of the removal of portions of the brain from these areas. That is a kind of experiment that is continued from day to day, and the object is to ascertain whether there is any sensation left; and that is ascertained by sending a shock through the system, and seeing whether it produces sensation or motion. I suppose it will not be doubted that the experiment is one "calculated to give pain". Now, was that experiment done and continued in violation of the restrictions imposed by law? I have the most implicit confidence in any statement made by my learned friend; but I should be greatly

astonished if he were to say that anything I have now stated indicates any fresh line or any fresh attack for which he was not prepared. I say, "You have been performing this experiment over a considerable length of time; and you ought, therefore, to have had a certificate". There is really no grievance in this matter at all. If it were so, it would be no answer; but, as a matter of fact, it is right that it should be pointed out that there is no grievance. If Dr. Ferrier has been carrying on these experiments—which, for aught I know, may be useful to science and to humanity—it would be a monstrous thing if those whom I represent were to come down upon the little men, and pass by the great men like Professor Ferrier. If their operations are justifiable, they are really the men who must keep within the provisions of the law. Men of eminence, men of science, men of benevolence, are precisely those who must bring themselves within the operations of the law; and, if they will do that, we shall have nothing to say against them. The experiments in question were carried on in King's College Laboratory. The operation which enabled them to make those experiments had been performed a long time before, possibly not even by Dr. Ferrier himself, possibly not even in this country. Now let me suppose a case. Let me suppose that, instead of these animals having the first injury done to them by the hand of Dr. Ferrier, had it done by the hand of any other person, Professor Yeo, for instance. Suppose that it had been done at Boulogne, or anywhere else, is it to be said that any professional gentleman in this country would be entitled to have an operation of that sort performed by an entire stranger on the continent, and then to purchase the injured animal and bring it over to this country to make experiments upon it when it was in a condition to which it could not have been brought in this country in accordance with the law? That would be precisely this case. An International Medical Congress was being held. The President of the Physiological Section, whom, if necessary, we shall call, for we have subpoenaed him, Dr. Michael Foster, opened the work of the section by a learned discourse; and then a person, with whom we have nothing to do except as a matter of history, Professor Goltz, read a paper upon the localisation of the functions of the cerebral convolutions. It was known that this was a subject to which Dr. Ferrier had devoted long, extensive, careful, and no doubt valuable, research; and Dr. Ferrier followed Professor Goltz, and made some observations which, I think, I shall be in a position to prove before you. Of course, much of the evidence will have to come from the mouths of gentlemen who were then present; and no doubt the views of many of them—I find no fault with them for it—are very strongly in favour of Dr. Ferrier, and therefore they will be, to some extent, unwilling witnesses. I will not, however, allow myself to believe that any of these gentlemen, whatever feeling or prejudice they may have in regard to Dr. Ferrier on behalf of science, will offer the slightest obstruction to the course of justice. Professor Ferrier stated that he had made certain experiments, not upon a dog, as in the case of Professor Goltz—who, I believe, brought a dog to England to show—but upon certain monkeys. I believe experiments of that sort have been going on for many years; and I hold in my hand lectures that have been delivered and published by Dr. Ferrier himself with regard to these experiments upon monkeys. In order to settle the question which was at issue between Dr. Goltz and himself, Dr. Ferrier either proposed or acceded to the proposal that the monkeys and the dog should be exhibited and experimented upon. I need not go into the minor question at issue; it is enough to say that there was a difference of opinion between Dr. Goltz and Dr. Ferrier. Dr. Goltz thought that he had proved certain facts. Dr. Ferrier stated—these are his words—that he was prepared to accept the facts of so eminent an observer as Dr. Goltz, but he rejected his conclusions, upon the ground that the experiments which he was at this time still conducting day by day on these monkeys, led him to believe in a different scientific result from that which had been attained by Dr. Goltz. Accordingly, they adjourned for the purpose of making experiments on these animals to King's College Hospital. I confess I am at a loss to understand how my friend can readily contend before you that that was not an experiment within the meaning of the statute. There was a dispute between two eminent medical authorities, which could only be settled by experiment; and they actually adjourned to the laboratory for the purpose of experimenting upon the monkeys and upon the dog.

Sir JAMES INGHAM: Was it with the view of performing an experiment causing pain?

Mr. WADDY: I am not prepared to say, nor do I think it is necessary. With great respect, that is not the question—whether the experiment caused pain at the time. It was one continuous thing. As I have already said, an experiment which causes pain at one time may cease to cause pain at another.

Sir JAMES INGHAM: You know that the statute was intended to put

down experiments causing pain. Would you contend that the experiment in question was continuing after pain had ceased?

Mr. WADDY: Clearly, with great respect. Subsection 4 of Section 3 says that the animal must be killed if the pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury has been inflicted. The question of pain ceasing is important in regard to one alternative; but it has nothing to do with the other. If the injury is continuing, that is by statute made equivalent to the causing of pain. You shall not do one of two things. You shall not, in the first instance, perform an experiment causing pain; and you shall not afterwards say, "Now the pain is all gone". You cannot defend yourself in that way. If you might do so, you could ride round the corners of the Act and destroy it altogether. You might have operations on animals performed in France, the most cruel operations in the world, and most unnecessary; and, by the very force and cruelty of the operation, the animals might be paralysed; then you might bring them to this country, and maintain that you were not committing a breach of the statute. Or, suppose that you did the thing in private, not allowing the thing to be known for six months, and then at the end of six months you might say that the Act did not apply. I am also reminded by my friend Mr. Coleridge that there is another way in which the Act might be defeated. A person who had a licence might perform these various operations, and then hand the animal over to an unlicensed person; and the unlicensed person might protect himself by saying, "I did not do the cutting and wounding; I did not perform the first operation—I am merely keeping the animal alive now that it is seriously injured." Or take another illustration, following out the same line of thought. You paralyse the animal so that it cannot feel; it has still the power of motion, but no sensation. You hand it over to an unlicensed person, who says, "Now it is all ready; it cannot feel, but the motor area is still untouched, and therefore the muscles will still work; I may cut off the right hand, and that will not cause pain". Would not that be inflicting a serious injury, although it would not be an experiment causing pain? and can any man contend that that would not be within the meaning of the Act? If it be not, I venture to think that the Act is one that is capable of very serious amendment. With great respect, sir, I submit that the question whether there was pain caused to the animal at the time is a matter beside the present inquiry. The experiment was a continuous one, and the mistake was that it was continued, according to the words of my summons, in violation of the restrictions imposed by law. The restriction imposed by law is either that the animal must be killed, or that the person experimenting upon it must have a certificate, and it will not be said that Dr. Ferrier had a certificate. I was about to say that the continuation of the experiment was at King's College, when several gentlemen were present. A portion of the brain was destroyed by what amounts to practically cutting it through with a red hot wire, and in that condition the animal was still left. I believe I shall be able to call the gentleman who wrote the report from which I have been reading, and who will no doubt be able to substantiate his own report. That being so, I think I am justified in saying that he did make experiments upon these animals there and then—Dr. Ferrier and others. I shall not attempt to inflame this matter. I am perfectly satisfied to leave it to you. My contention is not a surgical or a medical contention. I am not stating that Dr. Ferrier is a cruel or a brutal man. I am simply bringing forward the short and narrow point that Dr. Ferrier had not got a certificate. We must insist upon all gentlemen who perform these experiments keeping within the law, and it will not do to strike at small men and pass by the great men.

Mr. CHAS. SMART ROY was then examined by Mr. Coleridge: I am M.D. of Edinburgh. I was one of the secretaries of the Physiological Section of the International Medical Congress. A discussion was opened by Professor Goltz on the 4th August at the Royal Institution. Dr. Michael Foster was in the chair, and opened the proceedings. The discussion was on a subject in which I was interested, and I paid attention to it as far as I could. I dictated from memory a portion of the report which appeared in the BRITISH MEDICAL JOURNAL.

Mr. GULLY: The witness says he dictated a portion of what appears.

Dr. ROY: The report as it appears in the JOURNAL is not correct. It is not wholly in accordance with my memory of what passed.

Mr. COLERIDGE: Will you kindly tell us, as far as you recollect, what did pass?

Dr. ROY: Professor Goltz delivered the first address on the localisation of function in the cortex cerebri. He described his experiments, and the effects he had obtained from the experiments. I understood that he was seeking to determine what degree of truth attached to the assertion of Flourens, that large parts of the brain of living animals

may be removed without resulting in apparent loss of cerebral function. After Dr. Goltz had ceased, Dr. Ferrier continued the discussion. It did not in all points agree with what had fallen from Dr. Goltz. The substance of what he said was that he differed on certain points from Professor Goltz. He referred to experiments he had himself made, or assisted in making, in which portions of the cerebral cortex had been removed from the brain of the animal. I think he referred to monkeys. I cannot remember what words he used. I was attending to my own duties as secretary. The substance of what he said was that he removed certain portions of the cortex of the brain, and paralysis was found in certain muscles and limbs of the animal.

Mr. COLERIDGE: Did he refer to these experiments in detail?—I believe he did. I cannot describe the detail. I recollect only very vaguely what he said. As far as I can recollect, he referred to experiments which he had made in the course of his work on the subject. He removed certain portions of the brain in one case, and certain portions in the other case; and he found certain effects in one case, and certain other effects in another case. Professor Ferrier did not offer to exhibit at the Congress two of the monkeys upon which he had so operated. He showed certain of the members of the Congress two monkeys at King's College; but that had nothing to do with the Congress. The discussion ceased, and we went to the Physiological Laboratory at King's College, to see a dog that was to be exhibited and two monkeys, upon which an operation had been performed by Professor Yeo. I cannot recollect who told me that there were those monkeys there. The thing was talked of by the officers of the Section. Whether Professor Ferrier spoke to me on the subject, I cannot remember. In giving the address, Dr. Ferrier, I believe, alluded to the two monkeys which were to be seen afterwards. As far as I can remember, he said that there were two monkeys that would be shown at King's College upon which certain operations had been performed, and which showed certain results. I do not remember that he said that he had performed the operations. I went to the laboratory at King's College. There was a very large number of members of the Congress present. There were M. Charcot, Dr. Michael Foster, Professors Yeo and Huxley, Mr. Lee, and Dr. Ferrier himself. Speaking roughly, perhaps there were between seventy and a hundred altogether; the majority were foreigners. I do not remember seeing Dr. Pavy, M. Schäffer, or Mr. Ernest Hart. The monkeys were shown. Dr. Ferrier showed that, in one case, there was paralysis of one of the limbs; it could be seen. In the other monkey, there was almost or absolute deafness. Dr. Ferrier did not touch the monkeys, as far as I remember. The animals were evidently paralysed; it could be seen in their moving.

Mr. GULLY: My friend is pressing this gentleman to say something against Dr. Ferrier; surely he should allow him to give his own version of the matter.

Sir JAMES INGHAM: Just describe what passed. You say you saw the monkeys and that Dr. Ferrier made some observations upon them: tell us all that was said and done.—Dr. Ferrier showed that one of the monkeys did not move one of its limbs, and that in the case of the second monkey noises made close to its head did not attract its attention. These were the principal points he showed. With regard to the deafness he fired off a pistol close to the animal's head and showed that it did not turn round. The other monkey was moving about in the arena of the lecture room, and it was evident to everybody present that it did not move one of its limbs. As far as I can remember he said that in the case of the monkey which showed paralysis of the limb a certain portion of the cortex situated towards the front of the head had been removed. With respect to the deaf monkey, he said that another portion of the brain had been removed.

Mr. COLERIDGE: Had he mentioned these monkeys in his address?—I think he had. I have no notes of what I dictated. I do not remember that part of his address in which he explained the mode in which these results had been arrived at. I only made a report for the BRITISH MEDICAL JOURNAL accidentally afterwards. I dictated the report to a shorthand writer. I do not know his name. I have no draft of what was put in the paper. I first saw the report immediately after the JOURNAL appeared on Saturday, October 8th.

Sir JAMES INGHAM: When were you first asked to state your recollection of what took place?—On one of the last days of the Congress; within ten days of the delivery of the lecture. But I saw no printed report until October 8th.

Mr. GULLY objected that it was an inaccurate report.

Sir JAMES INGHAM: The inaccuracies may be pointed out. If it is substantially accurate, I do not see that there is any objection in allowing the witness to read it.

Mr. GULLY withdrew his objection.

(The witness read the report.)

Mr. COLERIDGE: Having refreshed your memory by reading what is before you, will you give us now a correct description of what took place?—I can only give what I have given already. I read this report before I came into court. I can give no more than I gave before. One dog was exhibited in the laboratory of King's College, besides the monkeys. The dog belonged to Professor Goltz. On this point I believe what I have stated here to be correct.

Mr. GULLY: I should like to know what this dog has to do with this case.

Sir JAMES INGHAM: For anything I know, an operation was then and there performed on the dog.

Mr. GULLY: That is not what we are charged with. I am brought here expressly to meet a charge of having performed an operation on two living animals, to wit, two monkeys. I take the objection in the interests of time, because my friend will find nothing was done to the dog.

Sir JAMES INGHAM: Was anything done to the dog?

WITNESS: No.

Sir JAMES INGHAM: I very much dispute part of the law laid down by the learned counsel in the opening. I do not see how the defendant can be made responsible for anything that was done by another person.

Mr. COLERIDGE: What was the matter with the dog?—The dog showed some diminution in the cerebral functions. He did not recognise his master so readily, for example, as a healthy normal dog would do. There were two depressions on the surface of the skull; they were somewhat hollowed out. The skull was more hollow than is normally the case in dogs. I do not remember that Professor Ferrier made any remarks about this dog, comparing it with the monkeys; he may have done so. Professor Yeo spoke on the subject of the difference between the dog and the monkeys. I did not hear Professor Ferrier speak on the subject at all, as far as I can remember.

Mr. COLERIDGE: What was the arrangement made in Dr. Ferrier's presence?—I do not think it was made in Dr. Ferrier's presence. As far as I remember, it was first arranged on board a steam-launch on the Thames, on Saturday during the Congress. Dr. Ferrier was present when the dog was looked at.

Mr. COLERIDGE: Was any arrangement made about the monkeys in Dr. Ferrier's hearing?—Not at that time, so far as I can remember. I do not remember that it was even made when both he and I were present at the same time. I know it was made, but I was not present, so far as I can remember, with Professor Ferrier.

Cross-examined by Mr. GULLY: The monkeys and dog were at the laboratory at King's College which is under the charge of Professor Yeo. As secretary at this meeting, I made minutes on some days. Professor Yeo is well known in the scientific world with reference to experiments of this nature. The animals were kept at his place, and, as far as I know, had always been kept there. As secretary of the section of Physiology, I had a good deal of business to attend to while the meeting was going on. A gentleman belonging to the BRITISH MEDICAL JOURNAL came to me some days afterwards, and asked me to give him some recollections of that discussion; and I gave him my recollection at the time. Something is added to it in the paper. That is all I know about the matter.

Dr. MICHAEL FOSTER, examined by Mr. Besley: I am an M.D. of the University of London; M.A. of the University of Cambridge; LL.D. of the University of Glasgow; a Fellow of the Royal Society; Member of the Royal College of Surgeons; Fellow of the Linnæan Society. I am likewise the author of several physiological works. I was President of the Physiological Section of the International Medical Congress, and occupied the chair during the whole time. I was present upon the occasion when Dr. Ferrier described experiments that had been made on the brains of monkeys. There was a discussion upon the functions of the surfaces of the brain. Professor Goltz opened the discussion, and maintained one view, which is, briefly, that the surface of the brain acts as a whole. Dr. Ferrier followed, and maintained that when any action, for instance, takes place in the body prompted by volition, a special part only of the surface of the brain is called into action. Each speaker brought forward facts in support of his view, and the discussion was carried on by subsequent speakers. The taking away of the brain of several dogs was mentioned, and of several monkeys. It was not stated where the monkeys then were. The method of operation was gone into in some detail both by Professor Goltz and by Dr. Ferrier. Professor Goltz said that the surface of the brain was removed by a rotating instrument, so that a very exact quantity of brain-matter could be removed; the depth of the matter removed being very exactly removed. The bony part, having been removed, was not replaced. A new covering was formed by a process of repair. I cannot remember any very great detail, except with regard to certain monkeys which were specially alluded to.

Sir JAMES INGHAM: Are you now telling me what Dr. Ferrier said?—I am trying to state, to the best of my ability, what was said by Dr. Ferrier on that occasion. I think several monkeys were mentioned, but that I do not quite remember at the present moment. The method in the case of certain monkeys which had been operated upon recently differed from the method employed before by Dr. Ferrier upon monkeys—inasmuch as they were performed on what is called the antiseptic method, therefore leaving results which could be trusted more explicitly.

Mr. BESLEY: Will you translate that a little more clearly to an unlearned mind?—You are aware, when a wound is made, it is apt to fester. That festering is brought about in large measure by organisms, which set up processes which interfere with the healing. In consequence of some inquiries by Professor Lister some time ago, a method was invented for dealing with wounds to the exclusion of these germs. That is called the antiseptic method. By that means wounds are made to heal in what persons, years ago, thought an incredibly short space of time, and with the smallest amount of mischief. That was stated by Dr. Ferrier as the method adopted with regard to particular monkeys. Professor Ferrier said that, in former years, he had removed from the surface of the brains of monkeys certain parts, and certain parts only; and he found, in consequence of the removal of those definite parts, certain definite conditions of the organism, certain definite failures for the most part. When, for instance, he removed a certain part of the brain, the animal was unable to move an arm; and, when he removed a certain other part of the brain, it was unable, say, to move a leg; that in other cases the animal, without any weakness of the muscular system, became blind or deaf, and so on; and he further said his former experiments upon monkeys had been corroborated by observations which he had been able to make upon monkeys on which Professor Yeo had operated; inasmuch as these other cases were monkeys which had been operated upon by the antiseptic system; and the whole of his results, both old and new, were in direct contradiction to Professor Goltz's. I think that is briefly what he said. I may observe, there are two sets of monkeys, the old and the new. The old monkeys were operated on by Professor Ferrier himself, and the new monkeys by Dr. Yeo.

Mr. BESLEY: Who stated that the monkeys and dog were in existence, and that comparison could be made between them?—I do not know whether it was stated that they were in existence. That possibly was the case; but there was no public announcement at the Congress that these animals would be examined. I, as President of the Section—and in that opinion I was supported by the Executive Committee—thought it very undesirable that there should be any possibility of the meeting of the Congress being entangled with what is popularly called the vivisection question; and therefore we decided that there should be no approach whatever in the official proceedings of the Congress to anything like a distinct vivisection experiment, so called, using a word to which I object; but it was thought by the physiologists present, who were there in considerable numbers, that it would be very desirable to examine these animals together—on the one hand, the dog brought by Professor Goltz, and on the other hand the monkeys which had been operated upon by Professor Yeo; and by a special arrangement, which was entirely conducted by myself, I saw Professor Ferrier and Professor Goltz, and they both thought that the opportunity should not be lost, and that the dog and the monkey should be examined privately at King's College laboratory, where the monkeys and the dog happened at the time to be. It was rather Professor Yeo's special invitation, but it was arranged by myself, as President of the Section, though not officially. Professors Goltz and Ferrier were consulted by me before it was done. A great number of foreigners and some English physiologists were present. I think the last witness rather underrated the English present. There was Professor Huxley, Dr. Carpenter, Professor Burdon Sanderson, and Professor Rutherford. The meeting was really typically a meeting of those interested specially in the brain. I did not preside upon that occasion. It was a mere assemblage. Professor Goltz, I believe, first spoke to the assembly, and pointed out the peculiar condition of the animal. Afterwards Professor Ferrier pointed out the condition of two monkeys. There were two monkeys on that occasion. One monkey in which we could see nothing the matter was brought in. It seemed to be a perfectly natural monkey. Nevertheless, when Dr. Ferrier fired a pistol behind its back, when it could not see what was done, the monkey showed no sign whatever of hearing; whereas the other monkey that was present was evidently startled by the noise. There was other proof that the monkey was deaf. The striking operation with the other monkey was this. Professor Ferrier offered it a biscuit, and, instead of taking it by the right hand, as it had been accustomed to do when it was healthy, it took it by the left hand. The

paralysed monkey was brought in by the attendant, and it was very obvious to anyone, skilled or not skilled, that there was a deficiency of movement on one side, more especially in the upper extremity. If I remember rightly, the animal walked across the arena, and it was very evident it was paralysed; and as it stood one could see it continually moved one hand, and only slightly moved the other. I think Dr. Ferrier pinched it. I forget how far the question of feeling was investigated. I remember distinctly the question of movement came prominently forward. One hand of the monkey was pinched, and the other side just slightly pinched. In the one case there was a rapid movement; in the other, not. I am not quite sure whether it was not what is called hyperæsthesia—that is, an increase of feeling on the paralysed side. That was the point of interest at the moment. No galvanic battery was used. After Professor Ferrier had spoken, other gentlemen took part, and more especially Professor Yeo, who had watched the animals for a long time. I think one or two other gentlemen spoke as well, and then the meeting broke up. Afterwards, talking with several physiologists, it seemed very desirable that an exact knowledge should be got of the conditions of the brain of the dog on the one hand, and the brain of the monkey on the other; and I arranged, chiefly through my own efforts with Professor Ferrier on the one hand, and Professor Goltz on the other hand, in accordance with a desire which was expressed by a large number of physiologists, that the dog and the paralysed monkey should be killed, and the brains should be most carefully examined by independent authority. The animals were killed, and the brains are now in the hands of a committee.

Mr. BESLEY: When was the killing?—I think it was Monday morning, during the Congress, but I had nothing to do with the killing. The committee appointed to receive the brains consisted of four eminent physiologists—Professor Schäfer, Dr. Klein, Dr. Gowers, and Mr. Langley.

Mr. BESLEY: You told us, with regard to the discussion, and the object of the experiment being made, and the contrast of the animals?—That is one thing. Of course, there is far more in the experiment than the mere contrast of the animals. That was quite a subordinate matter of the whole business. The dog itself was a whole series of problems, perfectly separated from any contrast with the monkeys. The paralysed monkey was selected for *post mortem* examination in consequence of something Professor Ferrier said. We all knew that this monkey had been operated upon by Professor Yeo in a definite way, and had received a definite superficial injury. In consequence of that, we could see for ourselves that there was a certain condition produced, and it became of very great interest to ascertain, by careful, and especially by microscopic observation after death, the exact nature of the injury which had been inflicted upon the brain?—The definite proposal to Professor Ferrier and Professor Goltz, that the monkey should be killed, came through myself; but it was simply an expression of the desire of, I may say, all the physiologists present.

Sir JAMES INGHAM: I should like to know what is the specific experiment calculated to produce pain which you impute to Professor Ferrier. It is proved that the two monkeys had been operated upon by another gentleman—Professor Yeo. I want to know what you impute to the defendant. What is the definite offence which you do impute to Professor Ferrier? It is proved that the monkeys were not operated upon by him, but by Professor Yeo. They are produced in the laboratory of Professor Yeo; they are produced by the servant of Professor Yeo; and Dr. Ferrier, who is an enlightened physiologist, appears to have taken an interest in the experiments. I should like to know what definite offence you impute to him.

Mr. WADDY: The only offence that can be imputed to Dr. Ferrier, as I understand, would be under this 4th subsection of the 3rd section—that the animal should be killed immediately, before it recovers from the influence of the anæsthetic. What would be the state of the case with regard to Professor Yeo of course I do not know; we have nothing to do with that now; but of course, if Professor Ferrier were there taking a leading part as one of the others, aiding and abetting in this experiment—if the thing that had been done was wrong—

Sir JAMES INGHAM: I want to know what is the specific thing that you say was wrong?

Mr. WADDY: Continuing the experiment upon this animal upon which serious injury had been inflicted, it not having been killed before it recovered from the influence of the anæsthetic which had been administered.

Sir JAMES INGHAM: Then you say that his pinching the monkey which had been operated upon by Professor Yeo made him a participator in that cruel experiment?

Mr. WADDY: I speak of the whole of the experiment carried on there and then—the comparison of the one with the other. I do not

rely at all upon the pinching—it is part of the particular thing ; but the mere keeping of these animals alive by Professor Yeo on the one hand and Professor Ferrier on the other hand.

SIR JAMES INGHAM : It is not proved that he kept them alive. I really wish to get a clear idea of the manner in which you shape your case. It is quite clear that the case proved by Dr. Foster is different from that which you opened, according to the best of my judgment.

MR. WADDY : Any persons who were taking part in the experiment, be they one, ten, or fifty—the experiment lasting over those months, being carried on at one time by Professor Yeo, and at another time by Professor Ferrier—these people, who were present, are, we contend, liable. Professor Ferrier refers in his address to certain monkeys, and then he offers these two illustrations of the doctrine which he has been propounding. Therefore we have him making, as I say, a continued series of experiments, or rather one continued experiment, in various parts, during the whole of this time; and any person, as we say, continuing an experiment which is one inflicting serious injury on an animal is liable.

SIR JAMES INGHAM : You know that proof is strictly limited to what took place in the laboratory. What is the specific thing that you say was wrong in what Professor Ferrier did?

MR. WADDY : Not entirely in the laboratory. We have it in evidence from Dr. Foster that there had been a statement made by Dr. Ferrier with regard to experiments made on the monkeys, and which were afterwards tendered in illustration of what he had been saying, and anything that had been done by way of watching and comparing is sufficient for my purpose. It is the not killing which is the important point; and, with regard to these animals, we have Dr. Ferrier examining, comparing, and making his observation of experiments upon animals which ought to have been killed, and which were not killed before recovery from the influence of the anæsthetic which had been administered. The matter prohibited here is an experiment that may have been commenced six months previously, and possibly even out of your jurisdiction. The experiment is a continuous offence from first to last, and if you can go with us in that view of the matter, it lasts while it is necessary to keep the animal experimented on alive, after the effect of the anæsthetic has ceased, for the purpose of making observations. It is one continuous experiment, and Professor Ferrier cannot shield himself now by saying that the actual cutting operation was performed by Professor Yeo.

SIR J. INGHAM : For anything I know, it was Professor Yeo who, without the knowledge of Professor Ferrier, performed a cruel operation, and then Professor Ferrier afterwards becomes acquainted with the fact that such an operation had been performed, and observes the effect. Would you say that that observation alone makes him guilty of the cruel act?

MR. BESLEY : If the experiment is the matter of offence, and not the cruel act of cutting, we say the experiment is the offence; namely, that during a lapse of time, not measured by hours or days, there was no authority for keeping the cut and maimed animal alive. Professor Ferrier is surely aiding and abetting the keeping alive when he is actually describing the state of the animal at the time, he being present and taking part in the discussion.

SIR JAMES INGHAM : You mean to say that the hundred scientific gentlemen who attended the laboratory were partakers of the cruelty?

MR. BESLEY : I say an active participation is quite enough. The statute says distinctly any person performing or taking part in performing any experiment which requires the life of the animal to be prolonged after it has recovered from the anæsthetic; and anyone must be participating in that experiment if he takes an active part whilst the animal is alive when it ought not to be alive. According to my idea of the Act of Parliament, there is no experiment provided for by this statute as being lawful which does not begin with anæsthetics and end with death.

SIR JAMES INGHAM : I confess I think there must be some participation in the original Act in order to make this an act of cruelty within the meaning of the Act of Parliament. There is not only no proof that Professor Ferrier had anything to do with the original act, but the proof, so far as it goes, is to the contrary. If you have nothing more to adduce, I think it will be my duty to dismiss this summons. You may if you think proper take a case upon the point because it is one of very great interest to the scientific world, and very important I am sure that magistrates who have to execute this Act would deem that some clear definition of the experiments should be given by a superior court.

MR. WADDY : I would rather not press that at present. (To the witness.) I am sure you will tell me to whom did these monkeys belong?—To Professor Yeo, I suppose. I do not know positively. I

did not ask Professor Ferrier's permission, but I asked his acquiescence that the animals should be killed.

MR. WADDY : I do not find any fault at all with the killing; the animals were anæsthetised before they were killed?—I believe so. At the time I was under the impression that the animals were the property of Professor Yeo, but Professor Ferrier was observing the animals, and had been observing the animals. This is what I have been told. I do not know who has told me; it may be Professor Ferrier; I rather think that Professor Yeo has told me. I am not quite sure whether I had conversed with Prof. Ferrier about the monkeys before the meeting. I may have for a little while, but certainly I had no lengthened conversation such as would leave any very great impression upon my mind. The existence of the animals was known to Professor Burdon Sanderson, and to the various physiologists in England. If I did, it was on the authority of Professor Yeo, because I see him much more frequently than Professor Ferrier.

DR. WAKLEY examined by MR. WADDY : I am editor of the *Lancet*. Professor Gamgee, Owens College, Manchester, furnished the report. I have the original manuscript. I was not present at the time.

MR. GULLY : Professor Gamgee is, no doubt, a very skilled scientific man, but when it comes to the question whether admissions have been made with reference to a criminal prosecution, of course I cannot take this gentleman's notes.

MR. WADDY : We have an account given by the *Lancet*. We have the name of Professor Gamgee vouched as being the gentleman who has furnished these notes and written this account. If my learned friend doubts the accuracy of the report, as I cannot call Dr. Ferrier himself, what I shall have to ask is that we may have an adjournment in order that Professor Gamgee may be called.

SIR JAS. INGHAM : The question is whether you have any objection to an adjournment for the purpose of enabling the prosecution to see what the evidence of Dr. Gamgee will be.

MR. GULLY : We object to an adjournment for a vague purpose like that. If my friend will say the precise point he expects Professor Gamgee to prove—he has had an opportunity of communicating with him and with Dr. Wakley.

SIR JAMES INGHAM : The *Lancet* must have been in the possession of the gentleman who instituted this prosecution, probably from the very date of its publication. If there was anything in the report contained in the *Lancet* that would support the prosecution, they might very well have made the inquiry of the editor, who would have furnished them with the name of the contributor. If they proposed to rely upon anything contained in the report, they most certainly ought to have had it.

MR. WADDY : With very great respect, we do not get much assistance in the course of a prosecution of this kind from gentlemen of the medical profession.

MR. GULLY : I do not know that my friend has tried to get anything from Dr. Wakley.

MR. WADDY : To-day is the first time we have ascertained who it was that was there for the purpose of observing and taking notes of what took place, and writing afterwards a careful article on the subject.

MR. GULLY : We have communicated with Professor Gamgee, and I know very well that he will say precisely what was said by Dr. Roy, that, on the question upon which they are relying, this article does contain false impressions. For that reason, I object to an adjournment merely to get Professor Gamgee here.

MR. WADDY withdrew his request for an adjournment on that ground.

SIR JAMES INGHAM : Then it would be convenient, I think, with reference to any proceedings that may be taken hereafter, for me to state exactly what my view of the case is. First of all, it is proved that the operation which caused the pain was performed by Dr. Yeo, and there is no proof that the defendant had anything to do with that operation. I also find, as a fact, that two monkeys were kept in the possession of Dr. Yeo. There is no doubt that some facilities were afforded to Dr. Ferrier to inspect those animals from time to time, and that he did inspect them, and took very great interest in the physiological results of the experiments made by Dr. Yeo. Further, I think the case cannot be carried. It does not seem that there was any thing more than that he took great interest in the results of a cruel operation performed for the purposes of science no doubt by another person. That would be my finding if any case is to go to a superior court.

MR. GULLY : As Professor Yeo's name has been mentioned in this matter, and in connection with a "cruel operation", I ought to say that this was an operation conducted by Dr. Yeo, not only in the interests of science—

Sir JAMES INGHAM : I would not say "cruel", but an "operation calculated to produce pain".

Mr. GULLY : Dr. Yeo, I may say, conducted it in strict accordance with the law, using anaesthetics, having a licence for the operation, and having a certificate for the keeping the animal alive during the period for which it was kept alive. Therefore everything was done in strict compliance with the law.

Sir JAMES INGHAM : The summons will be dismissed.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology, at a meeting of the Board of Examiners, on the 10th instant, and when eligible will be admitted to the pass examination.

Messrs. William Penhall, B.A. Cantab, Ernest K. Campbell, Charles R. Edwards, and William H. Bailey, students of St. Bartholomew's Hospital; Frederick A. Warner, Robert E. Molesworth, and Walter P. Squire, of St. George's Hospital; Ernest Webster, of the Manchester School; Thomas H. Miller, of Guy's Hospital; Wilson Pash, B.A. Cantab, of the London Hospital; Tom Scott, of St. Thomas's Hospital; and Ernest H. Goode, of University College.

Seven candidates having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, making a total of thirty-one out of the ninety-one candidates examined, including three who had an additional three months.

The following gentlemen were admitted Members of the College at a meeting of the Court of Examiners on the 14th instant.

Messrs. James Richmond, Preston, Lancashire; John Fryer, L.S.A., Batley Carr, near Dewsbury; Edward G. Ochiltree, M.B. Glasg., Victoria, Australia; Thomas R. Lewers, M.B. Melb., Melbourne, Australia; William H. Line, M.B. Dub., Daventry; T. P. Castaneda Y. Triana, M.D. Madrid, Habana; Thomas Greaves, M.D. New York, Charlottesville, Virginia; William M. Hurtle, L.S.A., Leeds; William Fligg, M.B. Ed., Edinburgh; Thomas H. Summerhill, Wolverhampton; Merwanji D. Karanjia, L.S.A., Bombay; Anthony G. Viljoen, M.B. Ed., Caledon, Cape of Good Hope; John Conway, M.B. Glasg., Glasgow; Daniel Riordan, M.D. Queen's Univ. Irel., Llandore, near Swansea; Matthew C. Sykes, L.R.C.P. Lond., Barnsley, Yorkshire; and Benjamin R. A. Taylor, L.S.A., Botisdale, Suffolk.

Eight candidates were rejected.

At this meeting of the Court, Mr. John Croft, of St. Thomas's Hospital, the recently elected member, took his seat.

The following gentlemen were admitted members on the 15th instant.

Messrs. John D. Evans, L.R.C.P. Ed., Llandovery; Ernest Martyn, M.B. Aberd., Southall; William J. Coles, L.S.A., Croydon; John G. Marshall, L.S.A., Wallingford; Richard Hingston, L.S.A., Liskeard; Hugh Rayner, Liverpool; Elliot Daunt, Launceston; Robert Williams, Liverpool; Henry E. Archer, Anerley, S.E.; Lauriston E. Shaw, Hastings; Thomas H. Chittenden, Maidstone; Edwin L. Adeney, Reigate; James E. Square, Plymouth; Bryce Gordon, Bombay; and William H. Hart, L.S.A., Streatham.

Thirteen candidates were rejected.

The following gentlemen were admitted Members on the 16th instant.

Messrs. John C. R. Husband, Ripon, Yorkshire; Robert G. Style, Chichester; St. Clair Thomson, L.S.A., St. Mark's Crescent, N.W.; George Fox, Huddersfield; George N. Pitt, M.A. Cantab, Sutton, Surrey; Hugh Kershaw, Brighouse, Yorkshire; Thomas R. C. Edwards, Gloucester Crescent; Ernest Birkett, Ramsgate; William F. Cleaver, M.D. Kingston, Stamford Street; H. Egerton Williams, Abertillery, Mon; George Greenwood, Dalston; Charles R. O. Garrard, L.S.A., Tickenhall, Derbyshire; Richard H. Cowan, L.S.A., Southsea; James Harrison, L.R.C.P. Ed., Manchester; Eldon Harvey, L.R.C.P. Ed., Bermuda; Herbert E. Deane, L.S.A., St. Peter's Park, W.; Benjamin Bertram, Cape Colony; and Francis Gotch, Bristol.

Twelve candidates were rejected.

At a meeting of the Council of the Royal College of Surgeons on the 10th instant, Mr. Edward Hadduck, L.S.A., of Biddulph, Congleton, was elected a Fellow of the College, of which institution he was admitted a Member on October 21st, 1842.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 10th.

Cortes, Herbert Liddell, Guy's Hospital.
Cowan, Richard Hamilton, London Hospital.
Dummere, Howard Howse, Victoria Dock Road, E.
Hingston, Richard, London Hospital.
Richardson, Adolphus Joseph, London Hospital.
Rowell, Robert Henry, Houghton-le-Spring.
Yeatman, John Walter, Royal Sea-Bathing Infirmary, Margate.

The following gentleman also on the same day passed the Primary Professional Examination.

Edwards, Charles Augustus, London Hospital.

UNIVERSITY OF EDINBURGH.—The following candidates have passed the first professional examination for the degree of M.B., October 1881.

M. S. P. Aganoor, Alfred Aikman, M. S. Altounian, J. M. Balfour, M. M. Basil, B. K. Basu, James Bell, G. L. Bonnar, Frederick Bond, J. E. Bottomley, Paul Bowes, Herbert Bramwell, D. M. Brown, T. A. Brown, J. R. Burns, J. M. Cadell, Henry Caudwell, Edward Carmichael, Thomas G. Churcher, E. W. Clarke, J. G. Cossins, A. H. Croucher, A. S. Cumming, Daniel Davies-Jones, Alexander Davidson, A. N. Davidson, D. R. Dow, Thomas Easton, Edwin Eckersley, George Fisher, J. W. Fox, A. E. Grant, Benjamin Griffiths, J. S. Haldane, P. B. Handyside, W. C. Helme, George Hewlett, W. H. Hill, Archibald Hood, T. A. F. Hood, Robert Howden, R. E. Horsley, C. W. Howatson, A. W. Hughes, B. E. Iastrzebski, R. Jackson, Hugh Jamieson, Hugh John, John Johnston, Thomas Johnstone, G. H. Kenyon, Henry Ker, Francis Kraemer, David Laing, W. S. Lang, A. W. M. Leicester, W. M. Little, H. J. Mackay, Wm. Mackay, F. L. McKenzie, J. H. McKenzie, N. J. McKie, John M'Myn, Archd. Macquene, G. D. Malan, J. W. Martin, D. J. Mason, Angus Matheson, R. T. Meadows, Wm. Miller, Duncan Menzies, Robert Mitchell, B. M. Moorhouse, A. E. Morison, E. J. B. du Moulin, Daniel Mowat, W. J. Munro, J. H. Neale, J. H. Neethling, Sydney Partridge, Ian Paterson, M. G. Pereira, F. A. Pockley (with distinction), G. Y. Polson, H. P. Pranker, H. H. Pridie, Joseph Priestley, J. M. S. Preston, E. E. T. Price, A. C. Purchas, Alwin Raimes, T. R. Raft, C. A. Renny, John Rigg, G. M. Robertson, John Robertson, J. S. Robertson, T. H. Robinson, Joseph Rutter, A. O. Schorn, William Shand, John Simpson, George Smith, William Sneddon, Y. S. Snitwong, Arthur Solomon, J. C. Steedman, H. F. D. Stephens, A. J. Stiles, H. J. Stiles (with distinction), J. W. Stirling, J. M. Stormouth, G. H. Symonds, John Sykes, T. S. Tanner, J. C. Taylor, William Taylor, Andrew Thomson, D. G. P. Thomson, H. A. Thomson, Thomas Thyme, Alfred Turner, J. W. O. Underhill, David Wallace, David Walker, E. F. S. Walker, N. P. Walker, L. W. Watson, A. K. Watt, E. G. Westra, G. E. C. Wood, J. E. Wolfhagen, J. C. Young.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—**DOUBLE QUALIFICATION.**—The following gentlemen passed their first professional examination during the October sittings of the examiners.

Ernest Herbert Schäfer, Middlesex; John Gormley, County Roscommon; Theodore Mailler Kendall, Sydney, N.S.W.; Thomas Sharples, Preston; Searle Monteith Haward, London; Alexander Willox McFadyen, Stirling; Francis Gurney Mason, Newark; William Stephen Johns, Norfolk; Eustace Julian D'Gruyther, India; Odoardo Tomaso Achille Villani Van Vestrant, London; Edmund Eyre, Limerick; James Maher, Ballinasloe; John Gower O'Neill, Hastings; Robert Currie, County Antrim; Edmund Walsh, County Cork; Alfred Ellison Muncaster, Manchester; John Oldershaw, Derby; Arthur Wellesley Wales, Belfast; Frederick Cyril Joseph Capes, London; William Henry Clifton, Wiltshire.

The following gentlemen passed their final examination during October and November, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh.

John Thomas Dickie, Edinburgh; Louis Fitz-Patrick, Dublin; Robert Andrew Stirling, Melbourne; Thomas Sharples, Preston; Henry Simpson Wood, Melbourne; Alexander Macdonald Westwater, Edinburgh; John Rusby Seymour, London; Edwin William Reilly, Calcutta; Robert Hall Nailor, Madras; James Callaway, Gloucestershire; James McGregor, Portsmouth; Edgar Rastricke Hanson, Cornwall; John Henry Whitham, Cambridgeshire; William Henry Fretz, Colombo, Ceylon; Malcolm L. Cameron, Canada; Dadabhoj Sarabji Shroff, Bombay; William Gunn, Canada; Maurice Frank Jones, Bombay; John Buchan Spence, Berwickshire; Theodore Mailler Kendall, Sydney, N.S.W.; Haward Roxboro Elliot, Iriquois, Ontario; James Hayward Hough, Cambridge; Duncan McTavish, Canada; William Cormack, Canada; William Ebenezer Berryman, Madras; Francis William Joshua Cirencester; Ernest Offord Stuart, Woolwich; Alfred Llewellyn Perkins, Cwm Amman; John Trimble Elliott, County Armagh; John Mackenzie, Sutherlandshire; Harold Athelstane Baines, Melton Mowbray; John Oliver Chisholm, Jedburgh; Robert Joseph O'Farrell, Galway; Michael Augustine Lyden, Galway; Frederick Erskine Paton, Broughty Ferry; John Norman Thompson, Madras; William MacGregor, Ceylon; William Bird, Yorkshire; James Ballantine Hogg, Edinburgh; Anthony Bailey, Yorkshire.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following gentlemen passed their final examination, and were admitted Licentiates of the College, on October 21st.

George Haddow, Galston; Alexander Bruce Low, Edinburgh; Alexander Stookes, Liverpool; Rudolph John Maas, Michigan, United States.

The following gentleman, having passed his final examination for the diploma in Dental Surgery, was admitted L.D.S. on October 20th. Matthew Finlayson, Alloa.

MEDICAL VACANCIES.

THE following vacancies are announced :—

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, Warwick Square—House-Surgeon. Salary, £30 per annum, with board and residence. Applications by 23rd instant.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant-Surgeon. Applications by December 6th.

CHARING CROSS HOSPITAL, Strand—Assistant Physician. Applications by December 3rd.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Physician to Out-patients. Applications by November 23rd.

GATESHEAD DISPENSARY—Resident House-Surgeon. Salary, £210 per annum. Applications to Mr. J. Jordon, Honorary Secretary, 2, Side, Newcastle, by 23rd instant.