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OPENING LECTURE OF THE FOURTH SESSION OF THE RESTORED MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

BY J. E. GRAHAM, M.D.

Mr. Vice-Chancellor, Ladies and Gentlemen:

I regard it as a great honor and privilege to give the opening lecture of this, the fourth session of the restored Medical Faculty of Toronto University.

There are some who look upon inaugural addresses as antiquated and useless. It is certainly difficult to find new and interesting matter for each year. This is more especially the case in the old-established medical colleges of Europe; but in this comparatively new country, where there are necessarily many changes and much improvement of the new upon the old methods, one can more easily select a theme which may be of interest to the students, to the profession, and to the public at large.

We all deeply regret that, owing to the fire of this year, this celebration cannot be held in the Convocation Hall, as formerly. On the other hand, we all rejoice that what seemed at one time an overwhelming disaster, is likely to become a real benefit, and that the University will rise from its misfortune to greater glory and usefulness.

There are many things in nature which are so easy to obtain, and of which there is such a profusion, that we are not conscious of the great benefits they are conferring upon us, until they are partially taken away or there is a threatened danger of their entire removal.

In the same way the people of this Province have had such easy and free access to this University that they became, to a certain extent, unconscious of the great benefit they derived from it, until there appeared some danger of its destruction. The expressions of love and admiration heard on all sides, as well as the handsome donations already made, are strong evidences that the public have at last begun to realize the great value of this institution and the importance of placing it on a thoroughly satisfactory basis. Let us hope that the good work will not cease until this University is made to take its proper position among the very first of this continent—in fact, of the world. The people of this Province are sufficiently wealthy and intelligent to demand nothing less, and it is to be hoped that the necessary funds for every improvement will be provided for, either by public or private endowment.

Three years ago, Prof. Wright, in the inaugural address of the first session of the restored medical faculty, alluded to the history of European universities, and of the great advantages they had derived from their medical faculty. He also demonstrated, by means of a chart, the disproportion between the increase of the Arts and Medical students during past years in

Toronto University, and, moreover, stated his conviction that its medical graduates were attached to their *alma mater* by but slender ties.

He then expressed the hope that the formation, or rather the restoration, of the medical faculty would increase the number of graduates, and would at the same time produce among the students who received their education here, a stronger bond of union with their University.

That these hopes have so far been abundantly realized, is shown by the history of the past three years. In 1887, the last year of the old order of things, there were only thirty medical graduates, whereas, in the spring of 1890, the number was fifty-three—an increase of twenty-three.

That the attachment of the undergraduates has been strengthened, is well evidenced by the gathering of students such as I see before me to-night. Your number and enthusiasm indicate strongly your appreciation of the type of education which this University is endeavoring to place within your reach.

It is to be hoped, gentlemen, when you go out into active professional work you will use your influence, that these privileges which we now enjoy shall be increased, not diminished, and least of all, taken away.

Three years ago, hopes were expressed, not only in Toronto, but throughout the Province, that the institution of this faculty would have the effect of raising the standard of medical education, so that its success would be shown by the quality of its graduates, as well as by their number.

Now that three years have passed, to what extent have these expectations been realized? Has the character of medical education been improved? Any one who will read the Announcement of this year and compare it with those issued five and six years ago, will be convinced that a great advance has been made in the methods of instruction in many departments.

Whereas, students were then able to graduate with a very superficial knowledge of the microscope, now they commence to learn the use of that instrument during the first month of their course. Then the instruction given in the primary branches, such as physiology and chemistry, was largely of a theoretical character; now these branches are taught in the laboratory, and the student is required to make experiments for himself.

The methods of instruction now employed in the dissecting-room are copied from the best-regulated dissecting-rooms of Great Britain. This, together with the increased number of demonstrators, is evidence of the great progress made in the teaching of anatomy.

As will be mentioned further on, the amount of clinical instruction given has been doubled during the last three years, and the teaching in pathology is of a more thorough and practical character than formerly.

Many of the most important processes of life cannot be understood without practical study of similar processes, as they are found in the lower animals. It is as if a student in mechanical engineering were placed before a most complicated piece of machinery and requested to study and describe its various parts, with their movements, before he had even seen the working of more simple pieces of mechanism.

Some will jeeringly ask of what importance is the study of the anatomy and physiology of the simpler forms of life, and how will such knowledge assist the student to understand disease in the human subject? Just in the same way as the study of the lever, the pulley, and of simple movements, will assist the engineer to at last so understand the most complicated machinery as to discover any defect or break which may exist, and to proceed at once to remedy it. Moreover, the student, besides receiving an excellent mental training, acquires in the laboratory a dexterity with the use of the microscope, the forceps, and the scalpel, which will be invaluable to him in the study of human anatomy and physiology, and in practical surgery.

In the laboratory, also, the pupil is taught to use his powers of observation, the proper training of which is a most important element of success in the practice of medicine.

Physicians all through their career are students of life in its various phases. Those before me to-day who have been the longest in practice will be the first to admit that they are constantly meeting with conditions never before observed. If, then, the processes of life are so varied and obscure in their manifestations, that none of us expect to fully understand them, how necessary it is that we should at least under-

stand, as far as possible, the fundamental principles of their operations, and this knowledge can be best obtained in a properly-equipped biological laboratory.

Physicians ought to rank among the first biologists, because they are constant students of the phenomena of life in the highest type of creation. That this is true, can be easily demonstrated by looking over the field of science to-day. The greatest discoveries in bacteriology, more particularly in those forms which produce disease in man, were made by two members of our profession, Lister and Koch. The latter made some of his most important investigations when he was engaged in country practice.

I am glad to state in this connection, that your lecturers in biology have also been students in Medicine, and this may account for their sympathy with you in your work, and for their enthusiasm in furthering your interests.

In the department of physics, the course is now of a much more practical and thorough character than formerly.

There are some men, whose minds dwelling on the good old times of the past, ask: Of what use is the study of prism, lense, and tuning-fork? What have these to do with the art of healing?

A fair knowledge of physics is necessary to an intelligent existence in any sphere of life; but a deeper and more practical knowledge is of the greatest importance to the medical student.

It is impossible for a physician to intelligently make an examination of the heart and lungs in the living subject, without having as a groundwork a good knowledge of the physical sciences. Then in surgery, how frequently a knowledge of mechanics is necessary in order to understand the movements of the skeleton, or to make apparatus for the keeping in place of broken bones.

Again, the great resemblance of nerve force to electricity, the varied effects of the latter upon the human organism, are of so important a character that, if the practitioner wishes to keep abreast of the times, he must have studied, not superficially, but thoroughly and practically, this branch of physical science. The study of physics is so intimately connected with medicine that some of the most distinguished physicists began their career as medical practitioners. I have only to mention the names of Dr. Young, Von Helmholtz, and Du Bois Raymond, in proof of this.

There are some who, while acknowledging the importance of biology and physics, are of opinion that, on account of the comparatively short time given for the medical course, the student should at once engage in more important work than dissecting down animals or examining physical apparatus. Now, let us enquire into this point more closely. The study of these branches is confined to the first year of the course. The student will gain more useful knowledge in an hour's demonstration, with proper apparatus, than he would obtain in a day from books and diagrams. He thus gains rather than loses time. If four winter sessions are not sufficient for the proper accomplishment of all the work, then one, two, or three summer sessions should be added. We are not doing justice to the public, we are not doing justice to the students themselves, if we allow them to pass out of this University without being as thoroughly equipped as possible for the responsibilities of practical work.

Again, there are some who, while acknowledging the great importance of biology and physics, are of opinion that the student should be sufficiently well instructed in them in the collegiate institutes, so that his attention could be at once given to medical work.

It is certainly most important that the elementary part of these sciences should be taught in our high schools; but the knowledge required by a medical student is much more extensive than could, in ordinary circumstances, be given in our institutes. The apparatus is very expensive, and no such school could afford to employ a teacher who devoted his whole time to one of these branches. It is, therefore, not possible for the student to obtain the necessary education in the preparatory schools.

In the department of chemistry the same marked improvement has been made during the last few years. The subject of organic chemistry is growing in importance from year to year. It is now evident that the further advance of the science of medicine will be along the line of organic chemistry.

The public are not sufficiently alive to the importance of having a well-educated profession.

When a member of a family is seized with a severe illness, how dependent we are upon the skill, good judgment, and attention of the physician! How often the result depends on such care and skill!

Then, taking a broader view, how many of the diseases which afflict humanity are of a preventable character! How often the spread of epidemics has been prevented by the adoption of scientific measures! To be convinced of this, one has only to compare the present age with two or three centuries ago. Then plagues and pestilences sometimes swept away a third of the inhabitants of a city in a season.

As a result of bacteriological investigation, we find that consumption is a contagious disease, and that its virus may be introduced into the system in milk and other forms of food. At the recent International Medical Congress, Dr. Koch, the discoverer of the bacillus tuberculosis, made the announcement that he had found an agent which would cure the disease, but that he had not yet made sufficient experiments to allow him to publish the discovery. With such knowledge this fearful scourge will no doubt be materially lessened in the future.

Thanks to the investigations of Pasteur, the prevention of rabies is now an accomplished fact.

The use of bichloride of mercury in antiseptic surgery is the result of scientific experiment. There are thousands to-day who owe their lives to the employment of this agent.

We cannot conceive to what extent disease in the human family may be lessened or robbed of its worse features.

I will here give a quotation from a letter recently written by Prof. Huxley to the *London Times* on the subject of Medical Education, as it bears out the points which I have been endeavoring to make. "The happiness, the usefulness, the very existence of each of us may at any moment depend upon the knowledge, sagacity, and technical skill in the use of eye, ear, and hand, of a medical practitioner. Every case of sickness or injury which presents itself to him must in the first place, be the subject of an investigation, which, if it is to lead to a successful result, must be conducted according to the canons of those methods of observation and experiment, inductive and deductive reasoning, which are nowhere so amply and clearly exemplified as they are by the different branches of physical science; while the first three but rarely find any exercise in the province of literature.

"It would seem, therefore, to be almost a self-evident proposition that the educational training for persons who propose to enter the medical profession should be largely scientific; not merely, or even principally, because an acquaintance with the elements of physicial and biological science is absolutely essential to the comprehension of human physiology and pathology, but still more because of the value of the discipline afforded by practical work in these departments, in the process of observation and experiment, in inductive reasoning and in manipulation. But the inestimable advantages of this practical scientific education are to be obtained only at the cost of the expenditure of a great deal of time upon it. It is a delusion to suppose that listening to lectures for two or three hours a week can confer a scientific training. Such a process may instruct, it cannot educate."

From this extract it will be seen that Prof. Huxley would demand a much deeper and more extensive knowledge of the physical sciences than is yet given to medical students in this University.

While on this subject I would like to refer to an address given by Mr. Lawson Tait at the recent meeting of the British Medical Association, at Birmingham. We agree with many of the views he expressed on that occasion, and would go quite as far as when he states: "One who has to follow the craft of Surgery ought to be taught how to use his hands. I should send him so many hours in the week to the shop of the village carpenter, and I should have him trained to use a saw, a plane, and a skew, so that he should be able to make a long splint as well as to put it on, and into the blacksmith shop he should go till he knew how to strike properly with a hammer."

But when Mr. Tait undertook to criticize the teaching of physiology and anatomy in the University of Edinburgh his address gives ample evidence of a want of accurate knowledge of the subject upon which he wishes to enlighten others.

The great object of laboratory teaching is to make just such thoroughly practical men as Mr. Tait would desire. Men who not only know how, but when, to operate, as well as the reason for such proceeding.

If the character of medical education has been improved only in the primary departments, physics, chemistry, and biology, we would have great cause for congratulation.

In the final departments, medicine, surgery and obstetrics, equal advance has been made, and that in the line of practical instruction. There are critics who insinuate that by our curriculum we will turn out theoretical men, whereas if they would only examine our course of instruction they would find that all the changes made have been with the endeavor to impart a more practical and useful education. This is true in the final as well as in the primary departments. One of the first changes made after the inauguration of the teaching department in medicine was a great increase in the amount of clinical instruction given in the hospital, and thus advance was made primarily at the instance of this faculty.

During coming sessions even greater and more important improvements will be made. The gentlemen having charge of these departments are determined that nothing shall be left undone to give the student a thoroughly practical training in this, the most important part of his medical course.

Now, while we agree that clinical work is of paramount importance, we also believe that a thorough primary course is necessary, for indeed it is impossible that the former studies can be carried on with success without a previous knowledge of the latter. A movement was made last year to place the subject of pathology upon a more satisfactory basis. This, like physiology, should be taught by one who devotes his whole time to the subject. It is therefore necessary to have an endowment, which together with the students' fees, will give a salary to the professor. We hope that this endowment will shortly be forthcoming. In the University of Zurich, to which I shall again refer, there is one professor and three assistants in the pathological laboratory. In fact, in most continental universities similar facilities are offered.

The medical schools of this city have a history of which they may well be proud. More than fifty years ago the subject of medical education was taken up with enthusiasm by the physicians then living, physicians who for ability and earnestness of purpose have not since been surpassed or perhaps equalled. They had, of course, to begin in a small way, but that many of them had an exalted idea of the requirements for medical education is amply shown by the establishment at that early day of a medical faculty in connection with King's College. From motives which we probably at this day do not understand, and will not therefore try to explain, this medical faculty was abolished after a few years' existence. That good work was done during those few years is evidenced by the number of beautiful specimens now in the museum, and students have ever since derived great benefit from the establishment of that faculty, in listening to the excellent lectures of Dr. Richardson, who was the professor of anatomy, and who no doubt during those few years of work performed exclusively in this one branch, acquired that marvellous facility for imparting instruction on an important and difficult subject.

From that time onwards the medical schools had to rely for their support entirely upon the students' fees. Their success under such circumstances depended on the energy, industry, and self-sacrifice of those gentlemen who were engaged in giving instruction. The education given was excellent in character and well up to the standards then existing. However, within the last fifteen or twenty years great changes have taken place in the teaching, both of the primary and final branches, changes which required the expenditure of large sums of money for buildings, equipment of laboratories, and for the endowment of chairs in special departments, chairs which could only be occupied by men who make the study of their subject their whole life work. These changes were being provided for both in Europe and America either by government or by private endowment. The University of Edinburgh erected an immense structure in which laboratories were provided for the various branches requiring them.

In Paris, similar large buildings were dedicated to scientific work in connection with medicine.

The medical colleges attached to the London hospitals took up the same work, and every German University, even to the smallest which possessed a medical faculty, had their laboratories for practical work, as well as professors who received a salary from the State. Some of these are on a scale of magnificence altogether beyond those of English schools.

On this continent a similar work was taken up by many of the universities of the United States. To some, as the Universities of Michigan and California, state aid was given. The sum of eighty thousand dollars was last year given by the state of California to the medical faculty of its university.

The Johns Hopkins University, the College of Physicians and Surgeons of New York, as well as other medical colleges, received large donations from private individuals for the same purpose.

The College of Physicians and Surgeons of New York received over half a million dollars from the Vanderbilt estate, and Mr. Carnegie built a laboratory in immediate proximity to Bellevue Hospital.

In our own country the medical department of McGill University, of Montreal, received the handsome sum of one hundred thousand dollars.

Under these circumstances it became evident that some action must be taken, or else there was great danger that our medical schools here would fall in the rear of those of other cities. The urgent necessity for funds did not seem to be appreciated by the wealthy men here as in Montreal, nor did there seem much prospect of receiving government aid.

Fortunately, just at that time changes were about to be made in the whole of the working of this University. Federation with other universities of the province was about to be established, and it occurred to some that the facilities for the study of biology, chemistry, and physics, which had necessarily to be made for the carrying out of the federation scheme, could quite as easily be made use of in the study of medicine.

In this way the whole question of the erection of buildings, of the procuring of expensive apparatus, and the engaging of special professors, would be at once solved. The matter was laid before the Minister of Education, who appreciating the state of affairs had inserted in the University Bill a provision for the formation of a medical faculty. Offers were made by the Senate to the two medical schools then existing to combine in the formation of a faculty. This offer was refused by one and accepted by the other.

As an evidence that the arrangement was entered into on the part of the Toronto School of Medicine, without any idea of pecuniary gain, the majority of the lecturers accepted salaries less than they were before receiving. A large proportion of the fees of each year goes to the University to indemnify it for any expense, and to provide for increased facilities for the students.

We often hear the statement made that our medical schools have been very efficient, and there is no necessity for outside aid. As a proof of this, the assertion is constantly reiterated that our graduates who proceed to England easily carry off the highest honors. Now, supposing this assertion to be quite correct, is it likely that in future graduates from our schools here will continue to take the same high standard in England, if we allow ourselves to fall far behind the old country colleges in the providing of educational facilities? Having so frequently seen this statement made that Canadian graduates carry off easily the highest honors in Great Britain, it occurred to me to make enquiries so as to gain accurate information on this point.

The University Degrees in Medicine are among the highest honors which English students can obtain. These degrees cannot without great difficulty be sought for by students who graduate here, as they would have to go through a certain lengthy prescribed course. These are therefore out of the question in the great majority of cases. The other honor examinations of importance are those for membership of the Royal College of Physicians and the fellowship of the Royal College of Surgeons.

Now what is the record of Canadian graduates in these examinations? Before the Royal College of Physicians during the past twenty years only one Canadian, Dr. Osler, of Baltimore, has succeeded in passing for membership. Sir James Grant, of Ottawa, passed previous to 1870.

Before the Royal College of Surgeons, during the past twenty years, seven Canadians have attempted the first fellowship examination and of these four succeeded in passing. Only two of those who passed the first entered for the final, and these succeeded in passing.

Thus during the last twenty years only one Canadian graduate passed the highest honor examination of the Royal College of Physicians, and only two passed the corresponding examination before the Royal College of Surgeons. Can it then be said with truthfulness that Canadian graduates have easily carried off the highest honors in England?

The examination for Licentiate before the College of Physicians, and that for membership of the College of Surgeons, although thorough and efficient, cannot be properly considered as honor examinations. They are simply those necessary for the London student to pass in order to obtain his license to practise.

A number of Canadian graduates have gone up for these examinations, and have succeeded in passing them. By doing so they have not taken higher honors than they obtained by passing for license here before the College of Physicians and Surgeons of Ontario.

We cannot, therefore, flatter ourselves that we have educated a class of students who, when they went to England, carried off easily the highest honors, nor can we adduce that as an argument for our remaining as we are, content with our present position.

If this has been the case in the past, how much more in the future will this unfavorable comparison exist between the Canadian and English graduate if we do not afford the same facilities on this side of the Atlantic as are to be found on the other?

Although I am careful to emphasize the fact that the Medical Faculty of this University is self-sustaining, I do not wish it to be understood that I am opposed to the granting of State aid for the furthering of medical education. For centuries past a medical faculty has been considered necessary to a fully-equipped university. The reason is obvious. Many of the subjects taken by medical students in the first part of their course are purely of a scientific character, and are of equal importance to the Arts students. Then again some medical subjects, as human anatomy and physiology, are now in a general way considered necessary to a liberal education. These could not be taught unless there is a teaching faculty in medicine.

In Europe, the ridiculous doctrine that public money should not be given to the furtherance of scientific and professional education does not prevail.

In this province public funds are provided for schools in agriculture and civil engineering, and at one time in veterinary medicine. Why the health and welfare of horses and cattle should have been considered of so much more importance than that of human beings is not easy to see.

I would like here to refer to the University of Zurich as an example which we ought to some extent follow. It was established on its present basis in 1864, with five faculties.

It now receives from the Canton of Zurich about $50,000 per annum, although there are but 200,000 people in the whole Canton. Fancy, if such a stretch of imagination were possible, that the people of the city of Toronto, now about 200,000, gave $50,000 a year to the University, and you will have some idea of the liberality of these enterprising Swiss.

Now the Swiss people are not distinguished for excessive generosity, but they are noted for the care and shrewdness with which they invest their savings. They give this $50,000 a year because it is a good investment, and they are not mistaken.

Of the three hundred students who attend the medical lectures, two hundred come from beyond the bounds of the Canton, from all parts of the world—thus bringing wealth and influence to Zurich. The same proportion of foreign students attend in the other departments, adding at least two thousand to the population of the city.

As an effect of this university, and the technical schools in connection with it, the people are becoming noted for their intelligence, skill, and enterprise. Factories and chemical works have been established in various parts of the country, so that the amount of wealth which pours into that little Canton is now enormous.

The old saying that "knowledge is power," although generally acquiesced in, is not acted upon to the extent it should be.

It must be remembered that in the Zurich University the medical faculty receives its proportionate share from the State. The pathological, physiological, and physical, laboratories are most complete, and each possesses an endowed chair.

The University of Paris, which has, during the last fifteen years, received five million dollars from the city for new buildings, devoted a large portion of that sum to the medical department.

I could in the same way enumerate nearly all of the universities of Europe, for they are in a similar position with regard to their medical faculties.

Now it may be argued that in this comparatively new country, where there are so many demands made upon the treasury for its development, funds should not be granted for the education of students in the practical or final branches, as surgery, medicine, and obstetrics. It is, however, of the greatest importance that the public should have skilful medical attendants, thoroughly educated up to the best standard at present existing. We have shown that it is impossible to give the necessary instruction in the more scientific branches—anatomy, physiology, chemistry, physics, and pathology—without an endowment It therefore seems but just and right that this aid should come from the State.

There are gentlemen before me, who having decided to take up the medical profession, are now entering upon the first session. To these, as well as to those who have already completed a portion of their allotted term for study, I would like to say a few words. It is possible that you may hear from one who has taken the same course in the same university, something that may be of interest to you.

Twenty-five years ago I listened to my first medical lectures, given by Dr. Richardson in the old Toronto School of Medicine, which then occupied the site on which this truly magnificent edifice now stands. Old students will remember the dingy lecture room, with its beautifully carved seats—carved by the penknives of the students. They will also remember the peculiar musty odor, which arose principally from decaying wood, and partly, I am afraid, from a badly ventilated dissecting-room.

We have now in its place this beautiful Biological building, so complete in all its appointments that we can confidently claim it to be second to none on this continent, and, as far as I know, to none in Europe.

If such changes are brought about in a quarter of a century, what may we expect by the end of another twenty-five years?

The fact of you being here is an evidence that you have thoroughly made up your minds as to the calling you wish to pursue. It would, therefore, be useless for me to speak of the advantages or disadvantages of the medical profession. That there are both everyone will admit. But he who practices medicine for the love of it will always find sufficient to absorb his whole attention, and to make him forget the many vexatious disappointments which are necessarily connected with it.

In your course you may be required to study certain branches which you may at first glance consider useless. Do not slight them on this account. Remember that these subjects have been placed in the curriculum by men of experience, men who have found out of them use in after life.

At the commencement of your course you will find it of advantage to cultivate the habit of working in an even and regular way.

Students, particularly those of the freshmen year, have many of them been in the habit of spending the first half-session in comparative idleness hoping to make up for the lost time in the second-half. Remember that lost time can never be made up. Commence to work a certain number of hours each day, allowing sufficient time for rest and recreation. Continue this plan throughout the session and you will not find it necessary to spend whole nights in useless cramming, but you will go up to your examinations with a clear head and a steady hand—two most important requisites for success.

Do not expect to obtain all, or even a major part, of your knowledge out of books. A great deal of the reading done by students is to no purpose. Whenever possible, try to have some object when you are reading descriptions. For instance, do not as a rule read anatomy unless you have before you that about which you are reading.

Remember that the hand, the eye, and the ear, require special training, and that this education can only be obtained by actual use.

Cultivate powers of close observation. It is astonishing how much passes before our minds as medical men every day which we do not really observe. This has always been the case. The wards of two of the largest hospitals of Paris have for years been filled with patients suffering from most wonderful and varied forms of nervous disease, but the whole subject of neurology was more or less in a state of chaos until Dr. Charcot published to the world the results of his careful studies of these cases. Men of great ability had preceded Charcot, but they apparently did not possess the same powers of observation.

The constant study of medicine is sometimes a little wearisome, and it is often advisable for a student to take up some favorite work outside of medicine, to which he may devote an hour or two each day.

There are so many branches of general education which will be of assistance to the practising physician; for instance, sketching, modern languages, general literature, etc. A student might take up one of these if he has time, but should make it quite secondary to that of medicine.

We are life-long students of men, of their character, habits of life, disposition, occupation, and ailments. Any kind of knowledge which will throw light upon our future pathway will therefore be of service to us.

There is another point I would wish particularly to emphasize, viz.: Thoroughness in all the work done. I would have the word "thoroughness" placed in some prominent position in every student's room, so that he would see it morning, noon, and night. It is not only necessary that we should be thorough in our work as students, but we should not forget it in after practice. Many mistakes are made in diagnosis, not from want of knowledge, but from want of thoroughness in the examination. It is of the greatest importance that the habit should be formed during student life, so that careless and slovenly work may be foreign to our natures.

To those who are commencing their third year, and who will be engaged for the first time in clinical work, a few remarks may not be out of place.

You will be taken to the bedside of patients in the hospital in order that you may acquire an intimate and practical knowledge of the various diseases to which the human body is liable You will frequently have the advantage, not only of seeing the physician examine and prescribe for patients and of hearing the remarks made, but you will have the opportunity of making examinations yourself. Please remember that the patient submits voluntarily to such examination, and that the greatest care should be taken to speak and act so as not in the slightest way to injure his feelings. Patients in hospitals have a weary life at best, and if we can do anything to brighten their condition we should not fail to do it.

Instances are not infrequent where the attention of a thoughtful and cheerful student has been of great benefit to the patient, while the student himself has obtained the information sought for more easily and in a more perfect way.

You will find by becoming acquainted with patients and taking an interest in their general condition, you will have no difficulty in making examinations.

In practical life, next to a good knowledge of your work, it is necessary to cultivate the habit of taking a deep interest in the welfare of your patients. If a sick person feels that he has not only a skillful physician but one who is taking an intense interest in his case, he will have a more contented mind and will be more likely to recover. This habit you may commence to cultivate in the hospital.

I would like on this, the commencement day of your career in medicine, to give you some motto which will sum up in one sentence all necessary advice and will act as a guiding star in your future life. Where can I better find this than in the sacred writings in which we seek for counsel in our doubts and difficulties? Could I do better than ask you to remember and ever act upon these expressive words of Micah—"What doth the Lord require of thee but to do justly, to love mercy, and to walk humbly with thy God?"

ADDRESS BY PROF. RAMSAY WRIGHT.

Professor Ramsay Wright, who was then called upon, expressed great gratification at the

views entertained by Professor Graham on preliminary medical education. He had visited during the summer some twelve of the more important European universities in company with Professor Osler, of Baltimore, and although his object was chiefly the study of the newer museums of natural history, he had had various other educational topics brought under his notice.

He referred to the instructive teaching collections in the natural history museums of London and Berlin as exemplifying the kind of arrangement which would be adopted in the new biological museum.

In confirmation of the wisdom of the recent changes in the history of the University of Toronto, he adduced the present position of the university question in London and France, stating that within a short time it is expected that London University will become a teaching body, and that the former isolation of the "faculties" in France will probably soon be remedied by grouping them into universities.

He attributed much of the recent progress of the biological sciences to the enlightened policy of State assistance to the scientific side of medical education, and called attention to the fact that these disciplines, which were at one time treated entirely as preliminary to the study of medicine, now rank equal with the other subjects of the philosophical faculty as a means of mental training.

The English universities have adapted themselves to modern requirements in this way, and include in the arts curriculum not only physics but also chemistry, and the various branches of biology, including anatomy and physiology.

Pathology and therapeutics remain as the special branches for cultivation within the medical faculty. On them the art of medicine is founded, but they themselves rest on the fundamental sciences of the primary course.

Professor Wright counselled the first-year students, therefore, to devote themselves to physics, chemistry, and biology, as affording the best foundation for their future studies. He also further counselled them to cultivate friendships outside their own faculty, so that the undergraduate life of the university might be thus cemented into a harmonious whole.

NOTE ON THE DIAGNOSIS, BY MEANS OF THE MICROSCOPE, OF PAGET'S DISEASE OF THE NIPPLE AND BREAST.

BY DR. A. B. MACALLUM,

Lecturer in Physiology, University of Toronto.

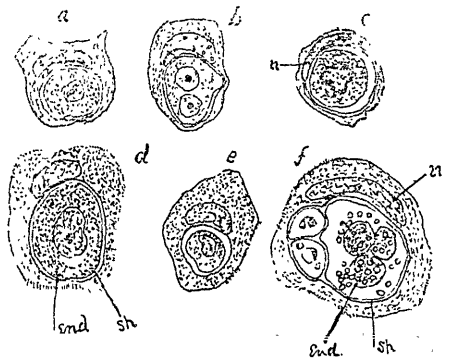
In Paget's disease the carcinomatous condition of the breast is generally supposed to follow on a long-standing affection of the surface of the nipple, which is comparable in certain respects to chronic eczema, but which, on histological examination, presents characters not observable in the latter trouble. As the usual methods of treatment for eczema are useless here, it is of importance at the outset to determine whether the case in hand is ordinary eczema or the disease in question. The ordinary methods of diagnosis have been hitherto purely clinical; the long duration of the supposedly eczematous condition, the infrequent itching, the feel of the nipple like a coin under a cloth, etc. Recently Darier and Wickham have proposed a new test,* which, on account of its easy application, may diminish the importance of the other means of diagnosis. It depends on the occurrence inside the epithelial cells in the affected part of peculiar elements, which are considered by these observers as parasitic sporozoa (or psorospermiæ) and the condition of the nipple is, accordingly, from their point of view, a case of psorospermosis. The bodies are usually found in, but not confined to, the lower layers of the epidermis, in the "eczematous" part, and they may be observed in the cells filling up the galactophorous ducts. They are usually large, and they may, according to Darier, measure from one-third to even one-half the stratum mucosum of the epidermis where they are placed. If now, one of the small crusts or scabs from the diseased nipple, examined with appropriate methods of preparation under the microscope. should be found to contain the bodies in question in greater or less abundance, the diagnosis of Paget's disease is, these authors claim, established.

*Darier—*Comptes Rendus de la Societe de Biologie de Paris* of the 13th April, 1890.

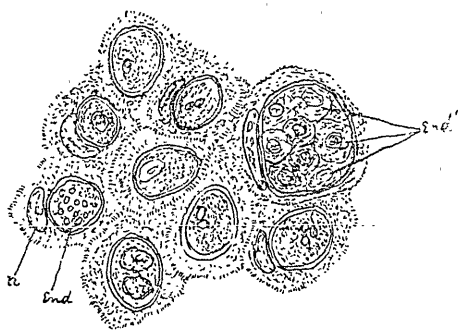
Wickham—*Archiv de Medicine Experimentale*, January, 1890; also his monograph, *Maladie de la Peau dite, Maladie de Paget*, Masson, Paris, 1890.

See also Prof. R. Ramsay Wright's lecture on Sporozoæ, PRACTITIONER, January, 1890.

I have had two cases of Paget's disease of the breast for examination, and from one case—that of Dr. Burt's, of Paris, Ont.,—I made a large number of sections, which furnished all the material necessary for a full study of these bodies. In the second case, which was under the care of Dr. Primrose, in the Toronto General Hospital, I had a privilege of examining after Darier's method, slightly modified, the disease in the unremoved breast, and found there, as in the first case, the bodies in question. Figures 1 and 2 are drawn from preparations so made from Dr. Primrose's case.



(Fig. 1.)



(Fig. 2.)

As these structures and analogous intracellular forms in epitheliomata are likely to be the subject of a great deal of interest in the near future; and moreover, as the views of Darier and Wickham, as to their nature, may not be endorsed by all pathologists, it is convenient to have a name for them which will express no preference for any particular theory. I have, therefore, selected the term *endocyte*,* which is both readily applicable and intelligible, and it will, I hope, serve the purpose until the question of the nature of these bodies is satisfactorily solved.

Darier's method was either to mount the crusts on the slide in water under a cover glass, and study them with a moderately high power objective, or, better, to tease out a crust on the slide in Gram's Iodine solution, and examine as before. When more or less fat is present, it is removed by placing the crust for several hours in a 10% solution of ammonia. The method which I adopted was somewhat different, and had the advantage, also, of making a permanent preparation. The crust, or a portion scraped from the nipple, was teased out in a drop of tincture of iodine on the slide, the cover glass put on, and after a couple of minutes a drop of 50% glycerine run in. The alcohol and the iodine fix the endocytes, and the iodine gives them a a brown, yellow tint, which fades slowly in glycerine. In the preparations from Dr. Primrose's patient, there were not a large number of free cells with endocytes enclosed, although forms like those of Fig. 1 were met with; but the most unmistakable evidence of the occurrence of the endocytes was furnished by some of the unteased portions themselves (Fig. 2). Here they were readily seen with their clearly alive membrane in a great majority of the cells, whose nuclei frequently appeared pushed to one side and crescentic in outline.

In an examination of the sections made from the excised breast of the same case, there were found a large number of endocytes in the epithelial cells, covering the retracted nipple, as well as in those filling the ducts.

As already stated, endocytes are present in epitheliomata, but less abundantly; and they have rarely the cystic membrane, and the large size found in those of Paget's Disease, and they occur, moreover, in the central cell of the "nest," which fact readily distinguishes them from those now under consideration.

I leave the question of the nature of the endocytes for discussion in a future paper.* Although not endorsing fully the views of Darier and Wickham with regard to them, I have no doubt whatever of their great value in the diagnosis of

* *Endon* within, and *kutos* a vesicle or cell.

* To appear as one of the memoirs of the Pathological Society of Toronto.

Paget's Disease, whether of the nipple or of any part of the skin.

LEGENDA OF FIGURES.

Fig. 1. *a*, *b*, *c*, *d*, *e*, examples of isolated epithelial cells with endocytes: *n*, the pushed-aside nucleus of the epithelial cell; in *b*, the endocyte has two nuclei; *end*, the endocyte *sh*, its refracting membrane; in *f*, the endocyte has undergone a process of degeneration and disintegration × 500.

Fig. 2. A group of epidermal cells with endocytes, *end*, *n*, the nucleus. In one cell there are several endocytes (*end*) present within the same membrane × 500.

WHY APOSTOLI'S METHOD SOMETIMES FAILS TO ARREST HEMORRHAGE.

BY A. LAPTHORN SMITH, M.D., M.R.C.S. ENG., LECTURER ON GYNECOLOGY IN BISHOP'S COLLEGE, MONTREAL.

As Apostoli's Method has now been applied about 40,000 times, with varying success on over 2000 reported cases, 600 of these having been under the care of Apostoli himself and the remainder under some of the ablest men of nearly every country in the world, it is about time to enquire why the success has been varying, or indeed why the method has ever failed at all to do what Apostoli has claimed that it would. One of the most decided claims which has been made for it was that it would arrest hemorrhage in every case; and as I firmly believe that it will do this in every case in which Apostoli's method is properly carried out, I think that it may be of interest to demonstrate if possible the causes of failure.

But first of all let us clearly understand what we mean by the term "Apostoli's Method." By this we mean the scientific and systematic use of the positive pole of the galvanic current in graduated doses of sufficient strength, and applied during a period of time long enough to cauterize the whole of the endometrium, or as Apostoli calls it, "*galvano-caustic positive.*" As I believe that failures have been due in every case to the lack of carrying out some or all of these conditions, I had better review them one by one.

1st. It must be scientifically applied; that is to say there must be no guess work about it; no depending on the patient's impressions or the number of cells in the circuit. Some patients will make a great outcry, as if they were suffering, while no current at all is passing in the circuit, while other women will quietly endure a current of 150 milliamperes without a murmur. Then a battery which at one time will give out a current of 17 milliamperes per cell will at another time only give a current of two or three. So that applying 10 cells may mean all the way from 20 to 170 milliamperes. Therefore, unless an accurate and reliable instrument is employed to measure the current with, it cannot be said that it is applied scientifically. The strength of current necessary to cauterize, varies in direct proportion to the amount of surface over which it is spread out. Martin, of Chicago, has ascertained by experiment that a current of 25 milliamperes traversing a positive platinum electrode of one square centimetre of surface pressed firmly against the mucous membrane of an hypertrophied cervix, the circuit being completed by a large abdominal electrode, will produce a dry condensed condition of the tissue beneath the surface of the plate on the membrane in five minutes.

A catheter measuring one-third of a centimetre in diameter is consequently about a whole centimetre in circumference, and for every centimetre in length of such a sound at least 25 milliamperes of current are necessary for cauterization.

What are we to do in cases where for various reasons the patient can only bear 50 or 75 milliamperes? We must simply take the precaution to expose not more than two or three centimetres in length of such a sound. If the uterine cavity is longer than that, then it must be treated in successive sections on the same or on different days. By using carbon electrodes of definite surface, we can regulate the strength of current necessary for cauterization, or by using flexible bougies covered with platinum, gold, or aluminum wire over a certain extent, of which more will be said later, the same object may be still better attained, as the higher the current which may be borne, the larger the extent of intra-uterine mucous membrane which can be dried up at a single sitting. It is

very important to leave nothing undone that will render strong currents more bearable; this requires attention to three details. First, to have the cutaneous electrode as large and moist as possible. Thus a clay or bladder electrode measuring six by nine inches will enable the patient to bear on the skin twice as much current strength as one measuring only three by nine inches, and a nine by nine will enable her to bear three times as much as a three by nine; and so on. Second, as the intensity at the intra-uterine electrode must be concentrated to a definite strength, namely, 25 milliamperes per square centimetre of surface, in order to be effective, it is obvious that we cannot diminish the intensity and consequent pain, without at the same time lessening the efficiency; in other words pain at the cutaneous electrode is avoidable no matter how large the dose, while it will be present at the active or internal electrode whenever the intensity passes a certain point. This point varies, however, very much in different women in direct proportion to the degree of development of the nervous system. Some women will endure without complaining 150 milliamperes, while others, more highly nervous, will hardly endure 25. In these latter women the best thing to do is to give them a small sprinkler bottle of the A. C. E. mixture in one hand and tell them to smell it from their handkerchief doubled up in the other hand. You begin at zero and increase the dose gradually until she has become slightly under the influence of the anæsthesia but not unconscious, when she will easily bear the desired strength of current. As long as she is able to feel very much she is able to help herself to the mixture, but when her sensibility has been sufficiently dulled she will cease to put any more on her handkerchief. I feel perfectly safe in doing this even without an assistant. As soon as the maximum has been reached, the anæsthetic may be removed. I have made a great many applications in this way and have never had the slightest accident. The only inconvenience is that the patient may want to sleep on my chair for five or ten minutes afterwards. In employing this treatment on highly educated and nervous women, I feel satisfied that a little anæsthesia enables us to employ much more effective doses without any pain whatever. Thirdly, fortunately women become accustomed to the passage of the current. Besides, their sense of modesty and and sense of fear must be overcome, especially as this latter is often mistaken for pain. So that it is very important to begin this treatment with great gentleness, not exposing the patient needlessly, and proceeding very slowly until she becomes accustomed to it. I generally expect to devote two or three sittings to overcoming their fears.

2nd. The treatment must be carried out systematically, that is at regular intervals until the bleeding has been stopped. Some patients will come once and then not return for a couple of weeks. One of the usual excuses is that they did not like to come while they were unwell; but as some of them are unwell for twenty-five days out of thirty it is necessary to explain to them that the treatment must not be delayed for that. I generally allow them to lose for two or three days, but if the flow is very severe I stop it at once. In fact in a case of bleeding fibroid I go on with the treatment three times a week quite irrespective of menstruation, until towards the end of the treatment, when I allow the patient to have a period without interference, in order to test my work. If we could give enough current at the first application to completely destroy the whole of the endometrium and if that spongy diseased lining membrane did not return again, then one application would invariably cure the patient. But such, unfortunately, is not the case. It requires several preliminary applications in order to test the patient's endurance or tolerance. Then it takes two or three more to reach a point where it becomes effective. Then we may not be able to turn on enough current to cauterize more than a quarter of the entire surface, if we do it in sections, or to cauterize through more than a quarter of the thickness of the vascular membrane if we try to do all the surface at once. Then we know the tumor came there by reason of bad circulation (at least such is my belief) and even if we do destroy the bleeding endometrium we cannot prevent it from being reproduced one or more times, or as long as the circulation remains bad. That such is the case is proved by the return of the bleeding after the whole of the diseased surface has been removed by the curette. But

we can also be sure that after each destruction of engorged tissue a healthier skin will be produced. This is proved by the result in every one of the cases which have passed through my hands during the last two years, in not one of whom has the hemorrhage from mucous membrane ever returned. Moreover, I could see as it were the mucous membrane becoming healthier by the gradual lessening of the quantity of the flow at each period. Thus a mucous membrane which was so diseased before treatment as to allow the blood to escape during fourteen days out of thirty would, after ten treatments, only bleed seven days out of thirty, and after twenty treatments only bleed four days, and after thirty treatments only bleed three days. In most of the bleeders who have come under my care, the mucous membrane was in such a friable condition that merely passing the sound with the utmost gentleness would cause a red stream to pour forth. I will illustrate this by a case. Mrs. P., æt. 33, came under my care on Aug. 6th, 1889. Dr. H. O. Marcy, of Boston, happened to be spending a few hours with me on that day and I invited him to examine the patient for me. It was impossible to pass a uterine sound, but on introducing a flexible bougie which he did with the utmost gentleness, the blood flowed out and ran on the floor of the office before I could catch it. She gave the following history: Five years before she began to suffer from painful and excessive menstruation; in spite of all her physicians could do for her she was never longer than one or two days a month free from hemorrhage. After several months treatment she consulted a specialist, who was unable even by packing her in ice to arrest the flow. In March, 1887, she consulted two other gynecologists, who decided that nothing short of total extirpation would afford her any chance of life. She declined the operation, and plugging of the vagina was next resorted to for the next two years, frequently necessitating the calling in of a physician in the middle of the night. By this time she was so weak that she could not walk up or down stairs without assistance, but after four months treatment with galvanization, extending from August to November, she was able to do all her own housework, including washing and scrubbing, while her periods returned regularly every four weeks and lasted less than four days. At no time during the five years previously did she ever go longer than two weeks without a period, nor for the last six months before commencing the electrical treatment was she ever more than two days per month free from hemorrhage.

One of the commonest causes of failure, I believe, will be found in the neglect to apply this coagulating surface of the positive pole to the whole of the bleeding surface. And to tell the truth, with Apostoli's solid platinum sound this is in some cases not only difficult but sometimes impossible.

The uterine canal, in some cases, is so deformed in direction by the projection of the tumors into it that a sound must describe many curves before it can reach the fundus. Over and over again I have failed to introduce a uterine sound or even a small probe farther than two and a half inches, and yet the canal was found to extend to over five inches by passing a flexible bougie, so that such cases when treated by Apostoli's method with the solid platinum sound are bound to be failures, simply because the bleeding surface of the cavity of the uterus is never reached at all. I can illustrate this point by some of my most successful cases, in which the attending physician, as well as myself, had tried many times to introduce a solid sound and failed, and yet I have been able to introduce a flexible bougie and then after perhaps a dozen applications have been able to get the solid electrode in the full distance.

The two following failures, one under my own care, and one under the care of a most competent confrere, illustrate well the disadvantage of a solid electrode and the advantage of a flexible one. A Miss B., æt. 26, was sent to me for bleeding fibroid. The tumor was slightly cystic. After thirty positive applications of an average current strength of 150 milliamperes the tumor was reduced about one-sixth in size, the periods were brought down from ten to twelve days to three or four days, and the inter-menstrual period was extended from two to four weeks.

The patient had regained her health so much, that at the end of three months' treatment she was preparing to return to her home, when a

period came on, which continued for fourteen days, and she was at the same time taken with an attack of localized peritonitis over an area the size of a quarter of a dollar. I at once considered this an absolute failure, although at the time I was quite unable to account for it, and therefore advised total extirpation, which was successfully performed shortly after. On examining the tumor, which proved to be a fibro-cystic one, and upon cutting open the uterus, I found the endometrium to be perfectly healthy, but the cause of the bleeding was seen to be a tiny hole into a uterine sinus, caused by the solid, unyielding platinum sound having burned its way through the wall of the uterus. The patient is now enjoying excellent health; but this accident would never have occurred had I then possessed what I show you now, namely, a flexible sound with a non-cauterizing point.

Miss S., æt. 35; began to menstruate at 15; regular always, lasting from five to six days; at 18 began teaching and caught cold, and from that time periods became more painful. About three or four years ago the pain disappeared, and the periods became longer; bowels moved every day or so. A year ago last summer she consulted a physician on account of profuse menstrual flow, when the presence of a fibroid was suspected for the first time. Took medicine, but without much effect. On account of this she consulted Dr. Chown, just a year ago. The bleeding was so severe that at first an examination could not be made, and he was obliged to tampon vagina, and while doing so discovered fibroid. Bleeding so severe that it came away in large clots. In June she went to Minneapolis to a private hospital, where electricity was employed. She received twelve or fifteen applications in three months. After this, periods continued to last from ten to fourteen days, but without hemorrhage, till the latter part of February, when hemorrhage returned, though not so bad as a year ago. Ergot lost its effect and upset the stomach too much. Oil of erigeron was also employed without effect. What did her most good was an herb, yarrow or millefoil.

On the 2nd and 3rd inst., she had an attack of nervousness, with an accumulation of gas, which seemed to press on heart, lasting, on and off, for three days. Then a brownish discharge from vagina came on, lasting about two or three days. Urine was pale, and flowed profusely. No obstruction to either bladder or bowels; had diarrhœa last summer.

Examination.—Tumor is a little larger than a fœtal head at full term, extending from the level of the umbilicus down half way to the pelvis. Laterally extends, on the right, from an inch of the iliac crest; and, on the left, from about two inches. The cervix is pretty far backwards, but can be reached with the finger. Tumor is slightly moveable; was unable to get either sound or probe in at all.

May 10, 1890. Tried again to-day; bougie went in 6½ inches; unable to get sound in more than 1½ in., it being arrested at interior os, which was exceedingly sensitive, the slightest pressure causing sickening pain. Gave her 25 m.m., 3 min., which she could with difficulty bear; tampon.

May 12. Sound went in 3 inches, forwards to left; 50 m.m., for 5 min.; tampon.

May 14. Douche, introduced special bougie without difficulty, and gave 35 m.m. +, for 8 min.; tampon.

May 15. 50 m.m. + for 8 minutes; no tampon.

May 16. Period came on at end of 26 days; has influenza, which she thinks brought on period sooner than it would have come; losing moderately.

May 19. Gave her up to as high as 75 m. m. +; she could stand 60 pretty well for eight to ten minutes.

May 21. Went up to 85 m. m. +; stood 70 well for 5 min.; bleeding almost ceased.

May 23. Gave current, 8 m.m. + for 10 min.; bore it more easily than positive.

May 26. For 7 min., gave 80 m. m. +, causing little pain; after application began to lose a little more freely, but stopped almost immediately.

May 28. 80 m. + for 10 minutes.

May 30. 80 m. + for 7 min.; bleeding almost stopped.

June 3. Severe pain Friday and Saturday; temperature 102°; pelvic pain; abdomen slightly tender; a few doses of antifebrine relieved her; gave her 50 m. + for 8 minutes.

June 5. Gave her 60 m. +; tampons.

Aug. 4. Period came on at the end of 28 days exactly, and lasted less than 3 days; gave her 150 m.m. + for 8 min.

This patient informs me that her doctor in Minneapolis had never been able to introduce the platinum electrode further than an inch and a half, and so, although he benefitted her generally, the diseased endometrium was never reached. I would not have had any better success with a solid sound, for there are three distinct curves in her uterine canal, which resembles the letter S. Nothing but a flexible electrode could possible enter the whole distance. It was dire necessity which compelled me to invent this flexible sound, made from aluminium wire wound closely, and a soft black gum bougie. I arranged for Messrs. Lyman & Co., of Montreal, to keep them on hand. They have the defect of not being very durable, although the one I show you has stood some forty applications. They are best preserved antiseptic, after careful washing, by standing them upright in a bottle of glycerine.

Selections.

CEREBRAL LOCALIZATION.

BY DR. DAVID FERRIER.

(An Abstract—Continued.)

THE AUDITORY CENTRE.

On irritation of the superior temporal convolution and its homologues in the lower vertebrates there is quick retraction or pricking of the opposite ear, associated frequently with opening of the eyes, dilatation of the pupils, and turning of the head and eyes to the opposite side. These are just the phenomena which occur when a shrill sound is suddenly made in a monkey's ear. If the movements of the eyeball on stimulation of the occipito-angular region are to be regarded as signs of the arousal of subjective visual sensation, we have in the reactions under consideration still more characteristic indications of the arousal of subjective auditory sensation. The determination, however, of affections of hearing is not so easy as that of sight in the lower animals.

A monkey in which Ferrier performed the operation of bilateral extirpation of the superior temporal gyrus, with an interval of one month between the two operations, was specially well adapted for experimentation in regard to the sense of hearing. It was a remarkably tame dog-faced monkey, and its character and modes of behavior under different circumstances were made the subject of careful study before it was operated upon. It was a noisy talking monkey. It invariably responded when called to by name, and came immediately when called. It imitated smacking of the lips and other signs of endearment. It always shouted vigorously and loudly when anyone approached or opened the door leading down to the laboratory in which it was kept. The rustling of a paper bag, from which it was accustomed to receive sweetmeats and nuts, was the signal for vociferous cries; as also any movement of the handle of a drawer in which apples and fruits were kept. It had an insatiable appetite, and was always clamoring for food, of which it never seemed to have enough. It had also an insatiable thirst, and the sound of splashing of water, made by turning on the water-tap, caused it to shriek to be let out and put its mouth under the tap. Not a sound could be made in its vicinity, or the movement of its companion monkeys in the other cages, without exciting its active attention. It was full of fun and mischief, and in every respect an animal unusually adapted for determination of any alterations that might occur in respect of its auditory or other faculties.

The left temporal superior convolution was scraped out on October 8th. On the second day it turned its head to the dangling of keys close to its left ear, but it did not do so, or very doubtfully, to the same test applied to the right. On Nov. 5th the superior temporal gyrus of the right side was similarly exposed and scraped out. On the third day, though otherwise alert and bright, it made no reactions to sounds of any kind, did not reply to calls, did not notice the noise of footsteps on the stairs, exhibited no sign of perception when the water-tap was turned on, though it was evidently intensely thirsty, as it drank eagerly when water was presented to it; it paid no attention to the cries of two animals which were placed in the adjoining cage, and, in general, responded to none of the tests of hearing which formerly aroused its active interest. Similar results were obtained three weeks

after the operation, and this condition remained practically unchanged until the death of the animal.

Ferrier states that he has not yet been able successfully to carry out observations on animals in which the temporal lobes have been destroyed on both sides; but if, as Schafer's experiments seem to indicate, the whole of the temporal lobes, like the other cerebral lobes, may be removed without entirely abolishing reaction to sounds, we should have reason for believing, with Louget, Goltz, etc., that in monkeys, as well as lower animals, a crude and simple form of auditory sensation is still possible through the agency of the lower centres.

Luciani and Tamburini found that unilateral destruction of the upper and posterior part of the third external convolution in dogs caused deafness in both ears, but to a greater extent in the ear of the opposite side. These authors believe that semi-decussation of the auditory nerves exists, similar to that of the optic nerves, and that both ears are represented in each cerebral hemisphere.

The occurrence of deafness from cerebral disease in man is unusual, owing to the extreme rarity of bilateral lesions affecting simultaneously both superior temporal gyri. There are, however, on record two important cases in which this double lesion occurred.

Shaw has recorded the case of a woman, aged 34, who, two months before her admission into his asylum, lost power in the right arm, and soon after had a sudden apoplectic seizure, resulting in loss of speech and deafness. The loss of power in the right hand speedily passed off. She became excited, incoherent, and subject to delusions. On admission she was found to be totally deaf and blind. Tactile sensibility and smell were unimpaired. She had occasional fits and ultimately died of pneumonia a year after her admission. Post mortem examination showed complete atrophy of the angular gyri and superior tempero-sphenoidal convolutions of both hemispheres. The other cranial nerves were normal in appearance, but the optic nerves showed increase of the connective tissue septa, atrophy of the nerve fibres, and spaces filled with a colloid material. Whether the blindness was due to the lesion of the angular gyri alone, or to the degenerative changes in the optic nerves, is a question; but the sudden onset of deafness in this case, coincidently with symptoms of cerebral lesion and the condition of the brain post mortem, point to the destruction of the superior tempero-sphenoidal convolutions as its cause.

A similar case has been reported by Wernicke and Friedlander.

The affections of hearing with which we are most familiar in connection with cerebral disease are the various forms of what is called "word-deafness"—a condition in which auditory ideation is impaired more particularly as regards the association of articulate sounds with acts of articulation and things signified. The word-deaf is not devoid of auditory sensation, for he can hear the ticking of a watch, and can recognize and hum an air, but articulate sounds, except perhaps his own name or some simple combination of words, have no meaning, and cannot be repeated. Word-deafness has been found associated with affection of the superior temporal gyrus in the left hemisphere. Seppili finds that in seventeen cases in which a post mortem examination was made, in every one there was lesion of the superior tempero-sphenoidal convolution, and twelve in which also the second or middle convolution was involved.

Of twenty-five cases of word-deafness, in all, except one, there was obvious lesion of the superior temporal convolution.

Further confirmation of the localization of the auditory centre in this convolution is afforded by cases of auditory discharges or subjective auditory sensations in connection with irritative lesions implicating the gyrus. Gowers has reported two cases of this nature. In one a tumor affecting the superior temporal convolution caused convulsions commencing with an auditory aura referred to the opposite ear. In the other a tumor affecting the superior temporal gyrus caused unilateral convolutions, preceded by a loud noise, as of machinery; and Hughes Bennett has reported several cases of auditory sensory discharges, followed by temporary loss of hearing in the opposite ear, or in both.

The facts of human pathology, therefore, undoubtedly support the view that the sense of hearing is localized in the temporal lobe, and

more particularly in the superior temporal gyrus of this lobe.

The experiments of Baginsky indicate that the auditory nerve is in relation with the auditory centre of the cortex through the lower fillet of the opposite side, and thence by means of the posterior tubercle of the corpora quadrigemina and corpus geniculatum internum with the medullary tubes of the cortex. Baginsky's experiments consisted in destroying the labyrinth in rabbits, and then tracing the course of the paths of degeneration thereby caused.

We have grounds for believing that the central fibres of the auditory nerve do not, as stated by Mequert, all pass through the cerebellum on their way to the cerebral hemispheres, a hypothesis which is otherwise inconsistent with the results of destruction of the cerebellum itself. Some of the fibres of the eighth nerve undoubtedly pass into the cerebellum, but there appears to be the vestibular fibres from the semi-circular canals, and not the cochlear or true nerve of hearing.

CENTRES OF TACTILE SENSIBILITY.

It is universally admitted, since the classical experiments of Brown-Sequard that, with the exception, perhaps, of the so-called muscular sense, the paths of all the other forms of sensibility are conveyed upwards on the opposite side of the spinal cord. But, neither experimental, nor pathological, nor microscopical investigation has accurately determined in which particular part of the opposite side of the spinal cord the sensory tracts ascend to the brain.

Ferrier has lately performed an experiment on a monkey in which he divided the convex or outer half of the lateral column, in the middle of the dorsal region. Though a slight amount of paralysis occurred on the limb of the same side, there was no impairment of tactile or painful sensibility on the opposite leg the day after the lesion. The slightest touch on either limb immediately attracted the animal's attention. In another, in which he divided the greater portion of one-half of the cord, excluding the posterior column, part of the anterior column, and that portion of the lateral column lying in the angle formed by the anterior and posterior cornua, there was almost complete motor paralysis on the leg of the same side, but sensibility was not abolished on the opposite side. Whether sensation was at all impaired could not be determined with certainty, but the sense of pain was undoubtedly retained.

These experiments are, therefore, opposed to the hypothesis that the antero-lateral tract is the path either of tactile or painful sensation.

In another experiment on a monkey, Ferrier divided the whole of the left side of the cord, with the exception of the anterior and posterior median column. Though the greater portion of the left posterior median column, and the whole of the right posterior median column, as well as the grey matter on the right side, and that surrounding the central canal on the left side, were intact, there was complete anæsthesia and analgesia on the opposite side of the body. This experiment, therefore, negatives the hypothesis that the posterior columns are the paths of tactile sensibility. It also is opposed to the hypothesis that the posterior median column is the path of the so-called muscular sense on the same side.

In another experiment, Ferrier endeavored to accurately divide the posterior median columns in the mid-dorsal region. Though the animal was for a few hours somewhat weak or awkward in its hind extremities next day, not the slightest impairment of tactile or muscular sense could be discovered.

Ferrier concludes that the evidence, from the various facts mentioned, is in favor of the view that the whole of the sensory paths pass up the opposite side of the spinal cord, and that they are not contained either in the posterior median column, or in the direct cerebellar tract, or in the antero-lateral tract; and as the pyramidal tract may be entirely sclerosed without any affection of sensation, we are led by a process of exclusion to suppose that the sensory tracts ascend in immediate relation with the central grey matter. If the sensory tract retains constant relation with the grey matter, this would account for their non-degeneration upwards like the other continuous apparent tracts of the cord.

Followed upwards in their course to the brain, clinical and pathological investigation would appear to show that in the medulla and pons the sensory tracts run in the fillet, or formatio reticularis. Higher up, the evidence is in favor

of the continuation of these tracts in the tegumentum of the crus cerebri, and thence into the posterior part of the internal capsule, whence they radiate outward, according to Fletchsig, and distribute themselves to the cortex in the region lying between the fissure of Rolando and the occipital lobe.

That the sensory tracts lie distinct from the motor in the posterior division (or rather posterior third of the posterior segment) of the internal capsule, has been amply proved by experiments and by researches on cerebral hemianæsthesia occurring in man. The sensory tracts being admittedly distinct from the motor in the internal capsule, the question then arises whether these, which up to this point have maintained their separate position, fuse in the cortex with the motor, as some believe, or are distributed to a special region.

In Ferrier's earlier researches, facts pointed to the hippocampal region as being the centre of common sensibility, and, therefore, experiments were devised to reach and destroy this region by itself.

Tactile sensibility was in every case impaired or abolished, in proportion to the destruction of the hippocampal and inferior temporal region. But it was established that a very extensive lesion might be made in one or both hippocampal regions without producing permanent anæsthesia.

The gradual diminution of the anæsthesia, at first induced by extensive, if not complete, removal of the hippocampal region, led Ferrier to suggest similar experiments on the gyrus fornicatus, or the ground that the tactile centre might extend into the rest of the falciform lobe, of which the hippocampal region was only apart. This originated the experiments of Horsley and Schafer on the gyrus fornicatus, which proved the accuracy of Broca's anatomical views as to the unity of the falciform lobe, and demonstrated that lesions of the gyrus fornicatus caused similar symptoms to those produced by destruction of the hippocampal region, of perhaps even greater intensity and longer duration.

It is not unlikely that, besides representing sensibility of the opposite side of the body generally, certain parts of the falciform lobe may represent more particularly the sensibility of special regions. But evidence is, so far, not conclusive of the existence of any altogether specialized centres in this general area.

It has not yet been found possible to produce total persistent loss of all forms of tactile and common sensation on the opposite side of the destructive lesions of the falciform lobe, but this may be due to the fact that this lobe has never been absolutely destroyed throughout its whole extent. It is probable, however, that common sensibility may, to some extent at least, be bilaterally represented, so that a certain amount of compensation may be effected by the falciform lobe of the other hemisphere.

No scheme of the cortical distribution of the sensory tracts can be admitted as correct which does not connect them with the cortex of the callosal and hippocampal convolutions.

OLFACTORY AND GUSTATORY CENTRES.

The position of the olfactory centre, or at least its principal portion, may, with great probability, be inferred from the cortical connections of the olfactory tract, altogether apart from physiological experiment. The connection of the olfactory tract, by means of its inner and outer root, with the anterior and posterior extremities of the falciform lobe, have been compared by Broca to a tennis racquet, of which the circumference is formed by the falciform lobe and the handle by the olfactory tract and bulb.

Broca divides all animals into two classes. First, the "osmatics," a class which includes the great majority of mammals; and secondly, "anosmatics," in which the sense of smell is relatively feebly developed. In osmatics, the olfactory tract and bulb are large, and the hippocampal lobule in particular attains extraordinary proportions, and in some animals constitutes the greater part of the cerebral hemisphere.

In anosmatics, the hippocampal lobule is relatively small in those such as man and monkey, in which the sense of smell, though good, is subordinate to other sensory faculties; while in the balænidæ, it is greatly reduced, and in the delphnidæ is almost entirely wanting. The posterior boundary of the hippocampal lobule is clearly indicated in the osmatics by an annectant gyrus, which interupts the continuity of the limbic fissure and unites the lobule with the parieto-temporal part of the hemisphere.

The effects of electrical irritation of the hippocampal lobule in the monkey and other animals are such as may be most reasonably interpreted as indicative of subjective olfactory sensation, namely, a peculiar torsion of the lip and nostril on the same side. Occasionally, however, the reaction is bilateral, and especially so in rabbits. It is an exceedingly difficult thing to determine whether smell is lost by destruction of the same region. Ferrier has found it very difficult to determine the appreciation of odors by monkeys from any outward signs of like or dislike. To most, what we consider very disagreeable odors, mixed with their food, they seem perfectly indifferent. The only odor which they seem uniformly to dislike is aloes. Ferrier, therefore, almost exclusively used aloes to test both the smell and taste of these animals.

Munk observed that in a dog which seemed unable to discover by the sense of smell pieces of meat which were scattered before it, after death the whole of the hippocampal gyrus on each side was found converted into a thin-walled transparent cyst, full of fluid. The hippocampal lobules were implicated, as well as the rest of the hippocampal gyri.

Clinical and pathological evidence of the localization of the senses of smell and taste is as yet comparatively scanty. There are clinical cases which plead in favor of the direct relationship of the olfactory centres. A case has been reported in which smell was impaired on the same side as the lesion, namely, a tumor which caused erosion of the uncinate convolution, and which did not appear to have, directly at least, affected the olfactory tract.

Several cases have been recorded of olfactory, aural or crude sensations of smell, in association with lesions implicating the region of the uncinate gyrus.

The smacking of the lips and tasting movements which are sometimes observed along with crude sensations of smell—"the dreamy states" of epileptic attacks—are probably discharges of the gustatory centres; but we have still fewer pathological facts bearing upon this point than on the situation of the olfactory centres.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.—"According to Dr. Petresco, who has been employing bisulphide of carbon in the treatment of typhoid fever, the difference in the mortality of cases treated in this way from that of cases treated according to more usually recognized systems is very considerable. The mixture prescribed was of the strength of two per cent., the vehicle being mint water. Of this mixture, from three to four ounces were ordered daily. The mortality of typhoid in Bucharest is generally from twenty-five to thirty-eight per cent., but under the bisulphide-of-carbon treatment, Dr. Petresco lost only ten per cent. of his cases. Even more remarkable were his results with B-naphthol, of which from forty-five to sixty grains were given per diem. Under this treatment he lost only four per cent. of the cases. Sometimes wet sheet packing was combined with the internal medication, sometimes not. He states that not only was the mortality diminished under bisulphide of carbon or B-naphthol, but that the whole course of the disease was rendered milder, and there was a remarkable immunity from serious complications."—*Lancet.*

CAMPHORIC ACID AS AN ANHIDROTIC.—*Lyon Médical* gives an abstract of an article by M. Leu, published in the *Bulletin Médical*, setting forth the results of certain trials of camphoric acid, given internally, to control the profuse sweats of phthisical patients. It was usually given at bedtime, in doses of thirty grains; sometimes that dose was given in the afternoon and a slightly larger one in the evening. It often happened that the anhidrotic effect was not shown until the third day, but generally the effect of a single dose lasted for several days. Out of sixty-five trials on thirteen patients, sixty per cent. were completely successful, and in twenty-two per cent. the sweating was moderated. The drug is soluble without difficulty in water, but dissolves more readily in alcohol. Its taste is said not to be disagreeable. Some trials of an alcoholic solution in the form of a lotion, for localized sweating proved satisfactory.—*New York Med. Jour.*

LOCAL TREATMENT OF HERPES ZOSTER—Duhring.—My ordinary treatment is to envelope the parts as tightly as possible with a linen or cotton bandage, the inner surface of which has been dusted with starch, and then laid on so

that there is a little layer of starch next to the body; then the cloth is sewn on tightly, making a perfectly skin-fitting bandage. The relief is prodigious. Private patients come back the next day, expressing their perfect satisfaction. I never touch the dressing, leaving it on for a week. This is my sole local treatment, and has been for a great number of years, and I don't ask for anything better.—*Columbus Med. Jour.*

PATENT MEDICINES.—The following formulæ of patent and proprietary medicines we take from the *Therap. Analyst*:

Carter's Little Liver Pills.

R Podophylli, - - gr. iss.
Aloes soc., - q.s. grs. iijss.
Muc. acaciæ.
M. ft. mass in Pil. No. 12 div.
Sig. 4 to 8 at night.—*New Idea.*

Castoria.

R Senna, - - ℥iv.
Manna, - - - ℥j.
Rochelle Salts, - - ℥j.
Fennel, - - - ℥iss.
Aquæ bullientis, - ℥viij.
Sugar, - - - ℥viij.
Ol. gaultheria, q.s.

M. Pour the water on the ingredients. Cover and macerate until cool, then strain and add the sugar and wintergreen.—*Ind. Pharmacist.*

FOTHERGILL'S ANTI-RHEUMATIC PILLS.—The late Dr. Fothergill used the following combination in a large proportion of his cases of chronic rheumatism:

R.—Arsenious acid 3 grains.
Powdered guaiac 3 drachms.
Powered capsicum 30 grains.
Pill of aloes and myrrh 3 drachms.

Mix and divide into 120 pills. One pill was ordered three times a day, in connection with a diet rich in fatty foods. Also, a general tonic treatment was in most cases found advisable at the outset.—*Med. News.*

NOT EVEN JOB WAS THUS TRIED.—A Gascon, ill with retention of urine, was suffering greatly, and his physician exhorted him to exercise a little of Job's patience. "Oh!" exclaimed the Gascon, "Job be ———! Job could always draw his water; I cannot!"

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, OCTOBER 16, 1890.

OPENING EXERCISES IN THE MEDICAL COLLEGES.

The medical colleges of Toronto are well filled with students who are now engaged in the routine work of the present session. The opening exercises in all were attended with a success that was exceedingly gratifying to the friends of the various institutions.

Dr. J. E. Graham and Professor Ramsay Wright spoke for the Medical Faculty of the University of Toronto, on the evening of October 1st, in the Biological Department, and extended a cordial welcome to the large body of students assembled. The admirable addresses of these gentlemen, were especially interesting on account of what they had to tell us about the various universities of Europe which they had visited during last summer. It was a great source of satisfaction to the many friends of the University to learn that we are working in the lines of the best universities of the old and new world in both a scientific and practical way

Dr. Charles Sheard delivered the opening address for Trinity Medical College. The Doctor is deservedly popular with the students, and received a most enthusiastic and flattering reception from them. The prospects for the college are bright, and there is likely to be a large attendance.

Dr. J. T. Duncan delivered an excellent address to the students of the Woman's Medical College. The doctor has been a staunch friend of this College since its inauguration, and by his great ability and sterling worth has done much to place it on a substantial basis. There was unusual interest attached to this

year's proceedings on account of the unveiling of a portrait of the able and worthy founder of the School. Dr. Barrett was one of the most noble men the profession of this country has ever seen. His untiring and generous efforts gave this institution a status, and although he met with many discouragements, it was very gratifying to him to know before his death that its success was assured. We are pleased beyond expression to see that his work has been fully appreciated, and will be remembered as long as the College has an existence, which we hope will be until the end of time. The present dean, Dr. Nevitt, was one of Dr. Barrett's special favorites, and all are pleased that he has shown himself such an able successor to so distinguished a man. We are not particularly enthusiastic about the creation of female doctors, but we must give "honor to whom honor is due."

The medical schools of Toronto, of other parts of Ontario, and the Dominion as a whole, are doing good work and are a credit to Canada. They show a desire to advance with the times, and are fairly successful in their efforts. The requirements for a fairly good preliminary education and a full course of four sessions have given our Colleges a standing which is fully recognized in all parts of the world.

Meeting of Medical Societies.

MEETING OF AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The annual meeting of the American Association of Obstetricians and Gynæcologists took place in Philadelphia on the 16th, 17th, and 18th of September, 1890. This society has for its object the discussion of the kindred subjects of obstetrics, diseases of women, and abdominal surgery. The first portion of the programme was confined to obstetrical subjects, and the remainder to gynæcology and abdominal surgery, in relation to the new advances in the treatment of obstruction of the ureter, intestinal diseases, diseases of the gall bladder, and peritonitis. The chair was taken by the president, Dr. E. E. Montgomery, of Philadelphia. The very efficient secretary, Dr. W. W. Potter, of Buffalo, was in his place, and to his faultless arrangements much of the success of the meeting was due. Everything proceeded with clock-like regularity. Among those present, memory serves to mention the following:—Drs. E. E. Montgomery, J. Price, Baldy, and Hoffman, Philadelphia; Dr. W. W. Potter, Buffalo; Dr. Rohe, Baltimore; Drs. Van der Veer and Townsend, Albany; Drs. A. H. Wright and J. F. W. Ross, Toronto; Drs. Reed and Hall, Cincinnatti; Dr. Davis, Birmingham, Ala.; Dr. Seymour, Troy, N. Y.; Dr. Weider, Pittsburg, Pa.; and others.

The discussions on many important matters connected with abdominal surgery were especially valuable. Dr. Van der Veer, with commendable courage, read reports of some very interesting cases, on which he invited criticism. The paper was not, as many papers are, a record of easy successes or of difficult cases with successful recoveries, but a record, faithfully prepared, of cases operated upon as a last resort after many delays, some with fatal termination, some with successful termination, and some with partially successful termination. One case recorded of artificially-established intestinal anastomosis is an addition to the records of the history of intestinal surgery that should encourage other workers in the same field. The patient died subsequently, but the intestines were found completely united, although a contraction had occurred at the artificial opening. If any one is sceptical as to the kind of union that will occur between the ends of resected intestine, he has but to visit the Army Medical Museum in Washington, and examine the specimen presented by Dr. Halstead, now of Johns Hopkins Hospital. Union is so complete that the scar cannot be discovered except by most careful examination.

Another paper of particular interest was that presented by Dr. Hall, of Cincinnati, on removal of an impacted calculus from the ureter by combined abdominal and lumbar incision. The stone, after giving rise to symptoms of paroxysmal pain for three years, was discovered after making an exploratory incision, and was removed through secondary incision in the loin. The point of greatest interest was the cause of the pain. The stone was bean-shaped, and at the hilum a small slit existed through which, when clear and free from mucus, the urine trick-

led, but through which the urine could not find its way if blocked. This blocked condition produced a distention of the ureter and pelvis above the obstruction and gave rise to the pain.

The specimens shown by Dr. Joseph Price were of very great interest. Myomata sloughing, as a result of electrolytic puncture, were shown. Dr. Price showed many specimens and plates of pyosalpinx, matted ovaries and tubes, from patients in whose pelvis electricity had been given a fair trial by the most skilled electrical operators. He thought that if these electricians knew more of gynæcology and less of electricity the patients would be better off. A veil of mystery had been thrown around the use of electricity, and before a man was looked upon as fit to use it he must spend half a lifetime in his preliminary education. The general consensus of opinion was that the result of electrical treatment were disappointing, and that the cases came into the hands of the abdominal surgeon eventually; that electricity is a good caustic; that it will temporarily relieve hemorrhage in some cases of uterine fibroids; that it is useless in tubal disease or disease of the ovaries, or in ectopic gestation. As to its power of relieving pelvic pain, not much was said. Many reported results of the use of electricity were useless, owing to the impossibility of making a correct diagnosis without opening the abdomen. A suppositious diagnosis may be made, but it is not and cannot be verified without exploratory operation. To exemplify this point, Dr. Price showed a specimen removed before many of the members in the forenoon. He thought the woman had had a miscarriage and was suffering from puerperal pyosalpinx. He would defy any member present to diagnose the case even now with the specimen in his hand. Was it pyosalpinx or was it tubal pregnancy? He then opened it with a scalpel and it proved to be a tubal pregnancy. The fœtus was easily made out.

He held that Tait's idea of rupture into the broad ligament was not correct. He had seen many cases (and the one just shown proved the fact) in which no rupture had taken place into the broad ligament, but the tube had simply gone on dilating as it does in pyosalpinx, hæmatosalpinx, and hydrosalpinx.

A discussion of the supposed virtues of the Staffordshire knot took place. A case having been mentioned in which hemorrhage had taken place after the most careful use of the knot, Dr. Price said that he had long since given up using it and had returned to the simple old knot used by many celebrated ovariotomists of the past. The simple transfixion, crossing of the ligatures, and tying in halves, would not allow bleeding any more than any other kind of knot. It was not so much the knot as the man who tied it.

There can be no doubt that hemorrhage may occur after using any kind of knot, no matter how well applied. All of the best operators have had this experience.

The question of drainage after abdominal operations was discussed. Some thought drainage should be used in every case. Others that it should be used very seldom. The general weight of opinion seemed to be that drainage should be used whenever the abdomen was washed out, where there was danger of subsequent hemorrhage from adhesions, or a thick pedicle where there was much handling of the peritoneum.

The question of the necessity of drainage after washing out a tuberculous or an inflamed peritoneum was not discussed.

The wonderful record of Dr. Joseph Price, of twenty-six consecutive abdominal hysterrectomies without a death, was presented to the meeting in an informal way.

The report will no doubt be published before long in detail. This is the best record yet published.

The question of the advisability of performing vaginal hysterrectomy for cancer was discussed, and opinion still remains divided. The statistics on both sides have not yet been collated to the satisfaction of those holding neutral ground. Many are waiting to be convinced. The main questions seem to be: 1. Do the cases live longer after (*a*) vaginal hysterrectomy, (*b*) after high or low amputation of the cervix, or (*c*) after being left practically alone, or occasionally cauterized to relieve the hemorrhage?

2. Is the suffering greater up to the time of death (*a*) if they are simply occasionally cauterized; (*b*) if the disease returns after vaginal hysterrectomy; or (*c*) if the disease returns after amputation of the cervix?

3. In how many cases can we be sure (*a*) that if the uterus is removed the surrounding struct-

ures are not already affected; (*b*) that if the cervix is removed we have not already a nodule of disease in the fundus?

These points require consideration, and were brought up in the discussion, but were not satisfactorily answered, owing to the limited data from which to draw conclusions. If these questions could be answered by the collated cases of Tait, who is opposed to any operation; of Leopold, the ardent advocate of the operation; and of Van de Warker, the advocate of high amputation, and discussed by these surgeons at an international congress, a conclusion might be arrived at satisfactory to all concerned.

The treatment advised for gunshot wounds or stabs of the abdomen was immediate exploration by abdominal section. One case was cited in which a box-car at a railway siding was used as an operating-room, the damaged intestines were immediately repaired and the boy made an excellent recovery.

Dr. M. Price related a remarkable case of gunshot wound. The ball traversed the liver, injured the intestines, and went through the kidney. He repaired the intestines, took out the liver, and with the exception of a small abscess in the kidney, the girl made a good recovery.

Dr. E. E. Montgomery, in presenting a specimen of extremely early ectopic gestation removed by operation, took occasion to state that he had altered the views expressed by him at a previous meeting regarding the advisability of using electricity during the early months of ectopic gestation. He knew from subsequent experience that it was a useless agent in such cases.

The social features of the meeting were very enjoyable. Dr. E. E. Montgomery received the Fellows at his residence on the evening of Tuesday, the 16th. A cordial invitation was extended to the Fellows to be present at a reception given by Dr. Willard, at the Art Club, to the Fellows of the Orthoepædic Association. On Wednesday evening a sumptuous banquet was given to the Fellows by the Obstetrical Society of Philadelphia. A most enjoyable evening was spent. Dr. Parrish presided.

On Thursday the newly-elected president, Dr. Adam H. Wright, of Toronto, took the chair, and, after a few appropriate remarks, adjourned the meeting *sine die*. The members returned home, to the north, south, east, and west, to gather another harvest for the next meeting a year hence.

The place of meeting has not yet been decided upon, but I feel sure that if the executive committee could be induced to select Toronto the profession at large would make their visit so pleasant that they would be willing to return to us at no distant date.

Looking critically over the proceedings, one might justly say that, while a few of the papers were not up to the average, most of them were of a high order, and evoked discussions equal to any discussions I have ever heard, either in the American Gynæcological Society, British Gynæcological Society, or those we have read from the transaction of other special societies. We were particularly struck with the results obtained in abdominal surgery in all parts of this continent. Western, northern, and southern people need go no longer to New York to have their abdomens opened, because they can have them operated upon as well, if not better, with every comfort and without incurring so much expense, much nearer home.

J. F. W. R.

Correspondence.

Editor of CANADIAN PRACTITIONER:

DEAR SIR,—It may not be inopportune for me at the present time to refer to the attitude which, by the public press, I have noticed the Local Board of Health, which is only a committee of the Council, has taken with regard to the appointment of my successor in the position of Medical Health Officer for Toronto.

From the inception of the Local Board, under the Public Health Act of 1884, it has appeared that the work to be done by it was considered as but one of the functions of the Council, and hence during all my period of office I found that it was with the greatest difficulty that I could get any matter discussed except along the lines of its possible effect upon the interests of the individual alderman whose constituent any special offender against the laws might be; nor, indeed, in many instances was it possible to obtain the Board's permission to take active steps for the removal of many flagrant nuisances, since someone's particular friend would thereby

be, in his own estimation, financially injured. Now, had the completion of the Board been composed of a fair share of medical practitioners the many questions demanding prompt action would have been considered on their merits. This, however, does not seem to be what the Council wish, since I see that by the Local Board's action in their advertising for applicants for the vacant p sition, they have ignored wholly the sub-committee of medical men who were asked to co-operate with them, although it was stated at a recent meeting of the Council that the Board would fix a time for consultation with such committee.

I can assure the medical profession that unless they take strong action in this matter their views will continue to be ignored. Some aldermen do not want an independent Board, nor, perhaps, an independent medical health officer.

WM. CANNIFF, M.A., M.R.C.S. Eng.
15 Peter St., Toronto, Oct. 10, 1890.

Book Reviews.

Cyclopædia of the Diseases of Children, Medical and Surgical. By American, British, and Canadian Authors. Edited by John M. Keating, M.D., Vol. III. J. B. Lippincott & Co., Philadelphia.

The editor is giving to the world a grand work on diseases of children. This volume is fully up to the high standard shown in the former two. Every general practitioner should have this Encyclopœdia. Part I. treats of diseases of the digestive system, under the authorship of Drs. Pepper, Booker, Jacobi, Councilman, W. J. Taylor, Ashby, Packard, Senn, and others. Part II. diseases of the genito-urinary organs; by Drs. G. H. Fowler, Tyson, Goodhart, Morris, Willard, Van der Veer, Sturgis, Keating, Kelly, and others. Part III. Surgery —Minor surgeries and emergencies in children, by Dr. Dalles; Plastic surgery, by Dr. Morton; Wounds and their complications, by Dr. T. G. Morton; Anæsthetics, by Dr. Allis. Part IV. diseases of the osseous systems, and of the joints; by Drs. Neilson, Ketch, Bradford, McEwen (Glasgow), Gibney, Roberts, Gerster, Hopkins, and others.

The editor has been fortunate in his choice of authors, and the methods of the latter in dealing with the various diseases, both medical and surgical, are admirable, and leave nothing to be desired. We have never seen any long series of monographs more uniformly scientific and practical. We think the therapeutics will be especially acceptable to the "family doctor."

Personal.

DR. REGINALD V. BRAY, son of Dr. John L. Bray, of Chatham, has located in Mooretown, Co. Lambton.

DR. GEO. S. BALFOUR, of Edinburgh, was in Toronto a couple of days early in the month, where he was entertained by Dr. Grasett and Dr. Thorburn.

DR. A. T. CARSON was at Brooklyn, at last accounts, and his condition was considered very serious. His many friends in Toronto are anxious to hear of a rally.

DR. L. MCFARLANE'S injured leg is progressing favorably, but the owner is getting tired of his Long Island College boarding-house, and hopes soon to be back to Toronto.

DR. W. R. SHAW, who, after graduating, spent three years in the hospitals of the old country and America, including Johns Hopkins of Baltimore, has located on Elm Street, Toronto.

Obituary.

DR. MATTHEWS DUNCAN—One of the ablest and best known of British obstetricians, was Dr. Matthews Duncan, of London, Eng. It was a severe shock to the medical world to learn that he had died suddenly at Baden-Baden, September 3rd, at the age of 64. Born and educated at Aberdeen, he practised and taught for many years in Edinburgh. While there he was supposed to be the favorite candidate for the chair of obstetrics in the university, but he was defeated by Dr. Russell Simpson, a nephew of Sir James Simpson, who received the professorship. Soon after this, about twelve years ago, he was appointed professor of obstetrics in St. Bartholomew's,

London, and at once he left the city that had treated him badly for his new field where his science was highly appreciated.

Births, Marriages, and Deaths.

BIRTHS.

RICHARDSON—At Victoria, B.C., on the 2nd inst., the wife of Dr. W. A. Richardson, of a son.

STARK—At 21 Carlton street, on Thursday, Sept. 25th, the wife of T. H. Stark, M.D., of a son.

GLASSFORD—At Scotland, Ont., on Tuesday, September 30th, the wife of W. J. Glassford, M.D., of a daughter.

MARRIAGES.

CLOUSE—BINGHAM—At Orillia, on August 21st, Elias Clouse, M.D., of Toronto, to Annie Bingham.

RICE—SMITH—At Homer, N.Y., on August 21st, Peter J. Rice, M.D., of Nanaimo, B.C., to Winifred E. Smith.

HENDERSON—SRIGLEY—On the 27th Sept., by the Rev. J. Philp, at the residence of the bride's mother, 193 College street, J. J. Henderson, to Carrie E. Srigley, youngest daughter of the late Dr. Srigley.

RYAN—REYNOLDS—In Mount Forest, on 10th September, by the Rev. James Charlton, Mr. Thomas J. Ryan, Crown Lands Agent, Sudbury, Ont., to Dr. Helen E. Reynolds, only daughter of John Reynolds, Esq., of Mount Forest.

SMITH—GIANELLI—At St. Helen's church, on Tuesday, September 23rd, by the Rev. Dean McCann, W. Harley Smith, B.A., M.B., to Isabel, daughter of Chevalier A. M. F. Gianelli, Honorary Counsel of H.M. the King of Italy.

JONES—MORRIS—On the 2nd of October, at St. Margaret's church, by the Rev. C. J. S. Bethune, D.C.L., of Trinity College school, Port Hope, assisted by the Rev. R. Moore, rector, D. Ogden Jones, M.D., L.R.C.P., London, eldest son of Clarkson Jones, Esq., barrister, etc., to Maria Emily, daughter of Edmund Morris, Esq., of the Ontario Bank, all of Toronto.

DEATHS.

BOWN—At Brantford, on September 26th, John Young Bown, M.R.C.S.E., in his 70th year.

SISLEY—Suddenly, on the morning of Monday, the 20th Sept., Lucy Robins, beloved wife of Dr. Euston Sisley, Maple, aged 27 years.

NESBITT—At Central Island, on Sunday, Aug. 10th, Charles Hubbard Nesbitt, dearly beloved son of Dr. W. Beattie and Clara L. Nesbitt, aged 10 months.

Miscellaneous.

PHARMACEUTICAL EXHIBIT.

We were very much pleased to see the magnificent exhibit of pharmaceutical preparations made by Messrs. Parke, Davis & Co., at the late Industrial Exhibition, in Toronto. This firm, which have gained for themselves a world-wide reputation for the excellence of the medicinal articles manufactured by them at their main establishment in Detroit, have lately determined to extend their manufacturing business into Canada, and to this end they have erected a large and complete laboratory in Walkerville, Ontario, on the opposite side of the river from their home manufactory. Here they propose to manufacture all the standard medicinal products and fine pharmaceutical specialties for which their Detroit establishment is so famous, and we believe the machinery and apparatus which they have erected for this purpose are of the newest and completest kind. Their exhibit in Toronto was a very large and handsome one. It seemed to comprise every known drug, both in its manufactured state and as fully prepared for medicinal use; and in gazing at it one could only be filled with astonishment at the multiplicity of the resources which lie at the command of the skilful physician in battling with disease. We cordially extend to this enterprising firm a hearty welcome to Canadian soil, and trust that their venture may prove to be a profitable one. And on their behalf we bespeak from our readers a careful examination of the merits of their preparations as these from time to time shall be presented to them.