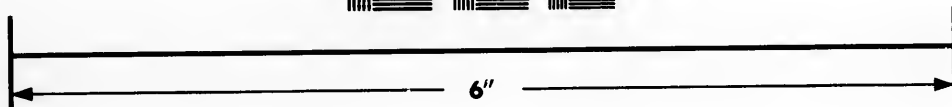
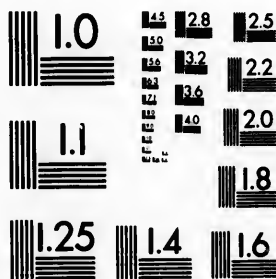


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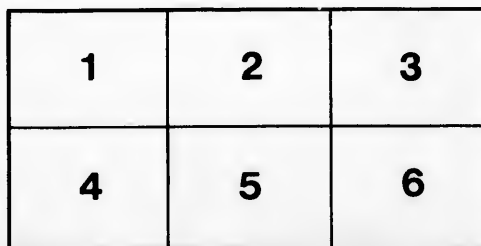
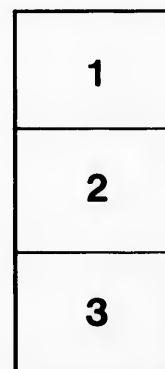
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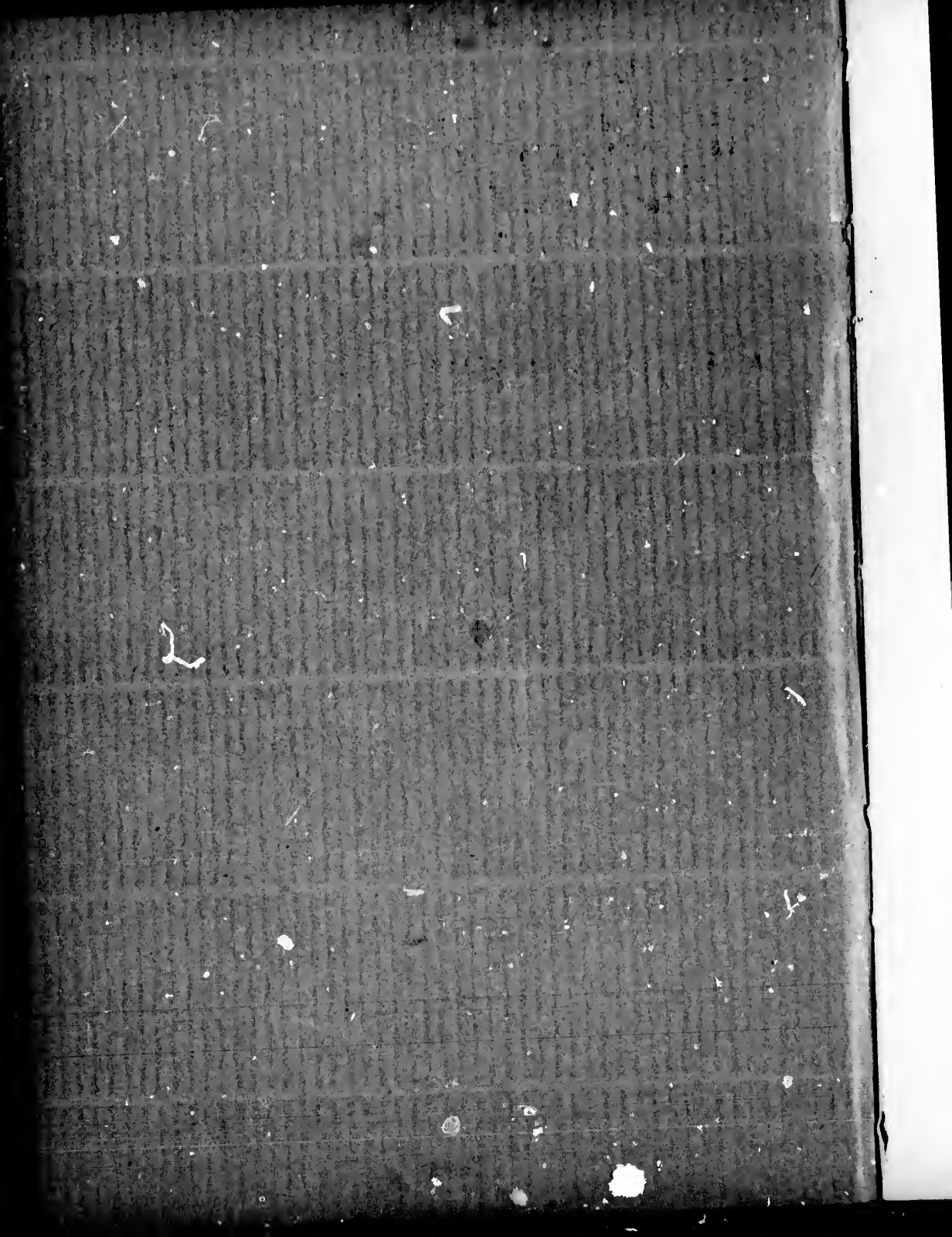
BY J. E. GRAHAM, M.D.

ALSO

An Address by Professor Ramsay Wright.

Reprint from **THE CANADIAN PRACTITIONER,**
October 16, 1890.

THE J. E. BRYANT COMPANY (Limited),
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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.,

ALSO

An Address by Prof. Ramsay Wright.



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OPENING LECTURE OF THE FOURTH
SESSION OF THE RESTORED MEDI-
CAL FACULTY OF THE UNI-
VERSITY 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 Euro-

pean 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 understand, 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 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 anti-septic 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 physical 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 delu-

sion 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 sub-

ject 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 the 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 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 con-

sidered 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, and 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 lecture, 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 have been brought about in a quarter of a century, what may we expect by the end of another twenty-five years?

The fact of your 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 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 better 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 skilful 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 those expressive and comprehensive 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

