

McGILL UNIVERSITY,

MONTREAL.

PUBLIC PROCEEDINGS

OF THE MEETINGS OF

Convocation for Conferring Degrees,

APRIL 1ST AND 30TH, 1890.

MONTREAL:

1890.

MUCH OF THE FOLLOWING IS BASED ON THE
EXTENDED REPORTS WHICH APPEARED IN THE
UNIVERSITY GAZETTE.

I.

FACULTIES OF MEDICINE AND OF COM- PARATIVE MEDICINE AND VETERI- NARY SCIENCE.

The annual public meeting of Convocation for the conferring of Degrees in Medicine, and in Comparative Medicine and Veterinary Science, was held in the William Molson Hall, on Tuesday, April 1st, at 3 p.m.

The members of Convocation met in the Library at half-past two, for the reading of Minutes, and closing the ballot for the election of Fellows.

After which the members went in procession to the Convocation Hall, where the students and friends of the University were already assembled. On the dais were the following, with others :—

Sir Donald A. Smith, the Chancellor (in the chair); Principal Sir William Dawson; Mr. John H. R. Molson, Mr. W. C. MacDonald, Mr. Samuel Finley (governors); Alexander Johnson, LL.D., Dean of the Faculty of Arts; Dr. Craik, Dean of the Medical Faculty; and Dr. Ross, the Vice-Dean; Prof. Bovey, Dean of the Faculty of Applied Science; N. W. Trenholme, Q.C., Dean of the Faculty of Law; Dr. McEachran, Dean of the Faculty of Comparative Medicine; Dr. Stewart, Dr. Shepherd, Dr. Wilkins, Dr. Cameron, Dr. Mills, Dr. Girdwood, Dr. Gardner, Dr. Rodger, Dr. Grant, Dr. Birkett, Dr. Johnston, Dr. Finley, Dr. Ruttan, Dr. Baker, Dr. McEachran, Rev. Principals MacVicar, Shaw and Barbour; Prof. Penhallow, F. W. Kelley, Ph.D.; Prof. J. Clarke Murray, John R. Dougall, M.A.; Prof. C. E. Moyses, Rev. Dr. Cornish, Rev. Prof. Scrimgeour, Mr. Justice

Cross, Rev. Prof. Coussirat, Dr. Godsgen, J. W. Brakenridge, B.C.L.; W. Skaife, B.A.Sc.; P. Toews, M.A.; E. H. Hamilton, B.A.Sc.; J. A. MacPhail, B.A.; M. W. Hopkins, B.A.Sc.

Rev. Dr. Cornish then opened the proceedings with the usual form of prayer.

FACULTY OF MEDICINE.

Dr. Craik, Dean of the Medical Faculty, presented his report, stating that the number of students attending were:—From Ontario, 111; Quebec, 71; New Brunswick, 26; Nova Scotia, 20; Prince Edward Island, 11; United States, 7; Manitoba, 7; Newfoundland, 2; British Columbia, 2; West Indies, 2; England, 1; a rather cosmopolitan collection. It will be observed that the number this year is greatly in excess of former years, as the following statement shows. Dividing the period into decades, the Dean showed that sixty years ago—in the session of 1829-'30—there were but thirty students in attendance:—

	Students.
In 1839-40.....	20
In 1849-50.....	44
In 1859-60.....	108
In 1869-70.....	141
In 1879-80.....	166
In 1889-90.....	261

It will be remembered that in '39 and '40 the rebellion occurred, and for two or three years the classes were closed. Only eight or nine years ago the University had almost reached the limit of its accommodation; the class-rooms and laboratories were overcrowded, and students, unable to obtain admission, were forced to go elsewhere. Then it was that the Chancellor came to their aid—(cheers)—and enabled them to further extend their usefulness. The Campbell Memorial Fund had also enabled them to add to their class-rooms, laboratories and equipments.

They had accordingly endeavored to increase the useful working of the institution. He felt that their efforts had been fully appreciated by the class from which their students are drawn. But while congratulating themselves they must face a feeling of anxiety. They had seen one period of stagnation owing to over-crowding; that must not occur again; they could not afford it. They must keep constantly advancing, and keep abreast of other institutions which are endeavoring to outstrip McGill in the race of efficiency in medical teaching. Medical teaching is not a remunerative employment; advanced methods have to be employed with the forward move of the times. The new system is largely, in fact altogether, practical. The Dean felt sure that their wants only require to be made known to friends in Montreal to gain the help necessary to carry on their work as it should be carried on.

Continuing, he said:—The following gentlemen, 56 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from the University. In addition to the Primary examination subjects, they have passed a satisfactory examination, both written and oral, on the following subjects:—Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Infancy, Gynæcology, Pharmacology and Therapeutics, Medical Jurisprudence, Pathology and Hygiene—and Clinical Examinations in Medicine, Surgery, Ophthalmology, Obstetrics and Gynæcology, conducted in the wards of the General Hospital and Montreal Maternity:—

G. A. B. Addy, St. John, N.B.; C. A. Ault, Oshkosh, Wis.; C. B. Bissett, River Bourgeois, N.S.; E. J. Bowes, Ottawa, Ont.; E. J. Broderick, B.A., Fredericton, N.B.; C. H. Burrill, B.A., Mitchell, Ont.; J. M. Campbell, Longueuil, Que.; J. W. Clarke, Tatamagouche, N.S.; P. J. Clune, Warkworth, Wis.; A. H. Coleman, Belleville, Ont.; F. G. Corbin, Bedford, N.S.; I. B. Curtis, Hartland, N.B.; T. H. Ellis, Pembroke, Ont.; D. J. Evans, Montreal, Que.; A. S. Gorrell, Brockville, Ont.;

T. J. Greene, Appleton, Ont.; H. D. Hamilton, B.A., Montreal, Que.; N. M. Harris, Ormstown, Que.; John Hayes, B.A., Richmond, Que.; W. E. Inksetter, Copetown, Ont.; A. F. Irwin, Chatham, Ont.; W. E. Jenkins, Conquerell, N.S.; C. P. Jento, Mellville, Ohio; D. N. Kee, Fordyce, Ont.; H. D. Kemp, Montreal, Que.; A. C. Leslie, Grand Forks, Dak.; A. A. Lewin, St. John, N.B.; G. L. Liddell, Cornwall, Ont.; A. G. Morphy, B.A., London, Ont.; O. Morris, Pembroke, Ont.; E. A. Mulligan, Alymer, Que.; M. W. Murray, Beachwood, Ont.; M. S. Macdonald, Scotchtown, Ont.; F. McEown, Winnipeg, Man.; H. H. McKay, Pictou, N.S.; R. E. McKechnie, Winnipeg, Man.; G. L. McKee, Coaticook, Que.; A. C. McLellan, Indian River, P.E.I.; H. D. McManus, B.A., Fredericton, N.B.; G. A. McMillan, St. Agnès de Dundee, Que.; C. T. Noble, Sutton, Ont.; C. O'Connor, Worcester, Mass.; A. J. Oliver, Cowansville, Que.; H. M. Patton, B.A., Winnipeg, Man.; J. T. Reid, Winnipeg, Man.; W. Robertson, Chesterfield, Ont.; James Ross, Halifax, N.S.; H. R. Ross, Quebec, Que.; W. D. Smith, Plantagenet, Ohio; W. J. Telfer, Burgoyne, Ohio; F. E. Thompson, Quebec, Que.; D. De J. White, Montreal, Que.; W. A. Wilson, Derby, N.B.; H. M. Williamson, Guelph, Ont.; E. H. Woodruff, B.A., St. Catharines, Ont.; F. S. Yorston, Truro, N.S.

He then read the lists of honour and passing in the several years, after which the graduates came forward, and the degree was conferred by the Principal in the usual manner.

Dr. E. J. Bowes then delivered the Valedictory on behalf of the graduating class.*

Dr. J. C. Cameron then addressed the graduates on behalf of the Faculty, as follows:—

It is the time-honored custom in this University for the Faculty to select one of their number to address a few words, in their behalf, to the graduating class. First, then, we congratulate you most heartily upon the successful completion of your collegiate course. Four long years of patient, steady work, culminate to-day in your Doctor's degree. The parchment you have just received testifies that you have attained the standard laid down by the University, have fulfilled all her requirements, and are fit and proper persons to practice medicine—while you on your part, have solemnly sworn to practice your profession

* The Valedictories have been printed *in extenso* in *The University Gazette*.

carefully, honestly and uprightly. The diploma you now hold is one of which you may well be proud, for in whatsoever part of the civilized world your lot may be cast, you will find that the reputation of your *Alma Mater* has preceded you, and will bespeak for you the confidence of the public and the respect of your confreres. (Hear, hear.) You will never have cause to be ashamed of your *Alma Mater*; look well that you never give her cause to be ashamed of you. To-day is with you a red-letter day, marking a great epoch in your lives. For four long years you have been toiling up the hill, with eyes fixed upon graduation day, as the great final goal of your efforts. Other realities of life have been obscured or overshadowed by the intense reality of *this*—your degree has been your *summum bonum*, and every nerve has been strained to win it. To-day the degree is yours; you have climbed the hill, reached the goal, but as you look around, lo! the realities, responsibilities, possibilities of life open out before you—your prospective is wholly changed, your life-climb has but begun. You were students before, you must be students still—you worked hard before, you must work harder still. Toil, the birthright of mankind, must still be yours, if you are not to be laggards in the race. Under the careful guidance and supervision of your teachers, the way has been marked out for you, its roughness smoothed, your faltering steps steadied. Now you are cut loose you must choose your own road and make your own pace; how far you will manage to push along will depend very much upon the energy, perseverance and singleness of purpose you henceforth display. In welcoming you to our ranks we would remind you that our profession is one of intrinsic nobility and dignity. In it science and charity, knowledge and sympathy, skill and pity, go hand in hand, ministering to the sorrows and sufferings of human kind. Its annals teem with deeds of heroism, self-sacrifice and devotion. When pestilence stalks the earth, when panic and fear seize upon the people, the physician will be found at the post of danger, firm, fearless and faithful. When human pity may wipe away a tear, human skill ease a pain, or human sympathy comfort and console—there, too, will he be found. Of all the brave and gallant deeds by land or sea, none are more truly great and noble than those of men who, amidst the horrors of pestilence, in the privacy of daily life, without the stimulus of excitement, publicity or hope of reward, have toiled without repose to assuage the misery of the sick and dying, and at last without a murmur have laid down their lives for their fellow-men.

Such is our profession; would you prove yourselves worthy of it, you must begin well, and continue as you begin.

Your character must ever be above reproach. Honor, uprightness and integrity must be the very *warp* of your lives. Then to the best of your ability you must keep well abreast of the times and strive always to be accomplished, educated physicians. Though now, no doubt, you know everything about medicine that is worth knowing, you cannot maintain that happy state of affairs without constant diligent study. Careful observation is the surest road to success. Train eye, ear, and touch; investigate every case thoroughly and systematically; observe everything, considering nothing too trivial or minute. Study the laws of cause and effect and apply them in your daily practice; consider each case as a problem you are called upon to solve. Study out carefully and estimate at its proper value the *personal* factor; aim to treat your patient, not his disease, and you will find the practice of medicine an absorbing, fascinating study, a never-failing source of pleasure and gratification, the best antidote to jealousy, irritation and querulous discontent. I pray you, do not allow yourselves to degenerate into the routine practitioner. Such a man cares very little for principles or deductions therefrom—the prescription is his great stand by—and with a pocketful of them he is armed for any emergency. He poses as a *practical* man, no theory or nonsense about him. While you study the cases which come under your care, do not fail to acquaint yourselves with the results and opinions of others. Attend medical societies and conventions, for there you come in contact with fellow-workers of riper experience, and mutual benefit is derived from criticising and being criticised. *Read diligently.* Read the current journals, they give you the latest news from the front; the pioneers of thought, the original workers and investigators are there, like pickets and skirmishers, spying out the land. At all events, it is news from the front, of absorbing interest, though subject to much alteration and correction, and not always trustworthy. In the text-books you find the solid ground that has been won.

In the practice of your profession you have certain well-defined duties to your patients—there is, in fact, an implied contract between you. They, on their part, place confidence in you, and trust you. In your hands are placed, sometimes, health and happiness, honor and reputation, the issues of life and death. You, on your part, in accepting such grave responsibilities, are bound to possess and maintain a competent knowledge of your profession, to devote due care and attention to your patients and exercise your best skill. In your professional relations, you will be admitted into the privacy of the family circle; in sickness the society mask is off and you will see poor

humanity in all its weakness. You will know the shadows that darken many a home, the hidden sorrows that embitter many a life; weighty secrets, important confidences may be committed to your care. And thus not only the lives, but often the prospects and fortunes of individuals, the peace, honor and happiness of families, and even the welfare of the community may rest in your hands. Upon your prudence and caution great interests may hang; beware how you betray them. Remember, too, that the personal factor enters very largely into the problem of success. By your patients you are valued not only for your medical skill, but also for the refreshing or soothing influence of your own personality—a gentle manner, a gentle voice and sympathy are potent factors in the cure. While you strive to be skilful in your profession, do not forget that when human skill is of no more avail, sympathy and kindness may temper a blow you cannot ward off, or lighten a sorrow you cannot avert. Be honorable, honest, upright; a sympathetic listener, a wise counsellor; but a *gossip*, a *talent-bearer*—never. Strive to be a ray of sunshine in every home; let the sick brighten at your entrance; let the little ones long for your visits; then when your life-work is drawing to a close—when you are old and gray—men and women grown, whom you have watched and tended from infancy, will love and revere you, and cherish your memory in the tenderest esteem.

When you begin the practice of your profession, you will be at once thrown into contact and competition with other medical men. Remember, you are fellow-workers; let no unseemly rivalry or jealousy mar your friendly relations. Follow strictly one code of ethics, for it is nothing more or less than a practical application to medical matters of the golden rule in its negative form—Do not unto others that which you would not have them do unto you. Be modest in your demeanor, especially to older men—perhaps they may not be as well up as yourselves in the latest teachings of the schools, but from long personal observation and experience, they have gathered rich stores of knowledge which no mere book lore can give, and which you must work many years to acquire. Do not forget that there is often room for honest difference of opinion. We sometimes hear it said that doctors differ. Of course they differ—and so do all men who are not mere machines; men who reflect weigh evidence, balance probabilities and use their own judgment and common sense. The clergy differ, lawyers and judges differ, philosophers, men of science, politicians, political economists, thoughtful men everywhere differ—and so do doctors. Not only is there room for honest difference of opinion, there

is room also for honest difference in treatment. You wish to go from McGill College to the Post Office; you have your choice of many different ways, each of which will eventually bring you to your destination. So you will find in practice, the same end may be accomplished in many different ways, the ultimate choice of method being largely a question of taste and tact on the part of the practitioner.

Besides our more immediate duties to our patients, there are other indirect obligations none the less binding. From the past we inherit the accumulated knowledge and experience of ages; it is incumbent upon us not only to transmit this goodly inheritance unimpaired, but also to contribute all we can to increase the store. Science entrusts us with various talents; in return she demands from us a profitable service. The best men in the profession everywhere consider it one of their first duties to record for the benefit of the profession, their cases, methods and results. But some of you may say, it is all very well for the city men, with their great hospital and other advantages, to do original work and advance the cause of science, but what can be expected from a poor country practitioner, isolated from converse with his confreres, with limited experience, few books, scanty means and opportunities all too few? No man's lot is so humble that he cannot cherish the scientific spirit. Your books may be few, but the great book of nature lies ever open; read thoroughly the few lines or chapters spread before you, and by mere concentration of attention you may discover therein a hidden meaning, undetected by those who perforce must skim from page to page. The country practitioner has one great advantage over his city confrere, he has time to think. The rush and whirl of city life is fatal to steady fruitfui thought, and we find that many of the brightest discoveries of scientific medicine, are the contribution of quiet, thoughtful men, with limited opportunities, but imbued with the scientific spirit. You are beginning your career in a time of unusual scientific activity; chemistry, experimental physiology, pathology, and pharmacology are rapidly changing the aspect of practical medicine. Sanitary science and preventive medicine offer specially rich fields for original research. The problems are legion, and demand for their solution carefulness of observation, accuracy of thought and soundness of judgment. Every one of you can do something. Above all, have faith in yourselves, have faith in your art. Let a firm abiding faith be the mainspring of your practice. No human theory is perfect—science and art are progressing, improving. Be ready to abandon the old when proved false, to accept the new when proved true. But do not

throw away the faith you have, until you are sure of another to take its place. An imperfect, defective faith is far better than no faith at all. It is, after all, very easy to pose as a sceptic or iconoclast; to sneer and rail at prevailing beliefs and practice; to profess disbelief in the efficacy of drugs, and the possibilities of nature, science and art. But such a mental attitude betokens weakness, not strength—conceit, not knowledge. I beseech you do not join the ranks of the medical nihilists; the man without faith in science, in his art, or himself, is like a ship without ballast or rudder.

Now, finally, you have some duties to the University. Hitherto you have been students of medicine, your chief allegiance has been to your own professors. To-day your *Alma Mater* enrolls you among her sons, and sends you forth into the world, bearing her name. In all her departments, she has claims upon your life-long interest and sympathy. While her reputation is in a manner your reputation, and her success your success, do not forget that in like manner your reputation is her reputation, and your success her success. Strive to be worthy of her—guard well the charge this day entrusted to your care. According to an ancient Jewish legend, the patriarch Abraham wore upon his breast a jewel, whose light raised those which were bowed down, and healed those which were sick. And when he died, the jewel was set in the heavens, where it still shines among the stars. May the badge conferred on you to-day be as mighty as the patriarch's jewel of old, and if you guard it untarnished to the very end, your names will shine forever among those starry hosts to whom the eyes of humanity ever turn with admiration, gratitude and love. Go forth, graduating class of '90, bearing aloft as your banner the motto "Excelsior," ever onward and upward, and may success attend your efforts. In the name of your professors, in the name of the University, Godspeed and fare you well.

FACULTY OF COMPARATIVE MEDICINE AND VETERINARY SCIENCE.

The Principal announced that the Corporation had been pleased to inaugurate the new Faculty by granting the degree of Doctor of Veterinary Science, *honoris causa*, to Professor Duncan M. N. McEachran, the Founder of the Veterinary College and the Dean of the Faculty. The degree was then conferred.

Dr. McEachran then read the lists of candidates for Graduation, as well as the lists of Honors and Prizes, and called up the candidates for the degree.

These were divided into those who had in previous years taken the certificate of the Veterinary College, and those who had passed in the recent examinations, as follows:—

FROM PREVIOUS SESSIONS.

Austin, R. D., V.S.; Baker, Professor Malcolm C., V.S., Montreal; Ball, E. P., V.S., Stanstead, P.Q.; Becket, Geo. C. V.S., Montreal; Bryden, Williamson, V.S., 36 Sudbury St., Boston, Mass.; Clement, A. W., V.S., Baltimore, M.D., U.S.; Couture, J. A., V.S., Quebec; Craig, Wm., V.S., Cornwall, Ont.; Daubigny, V. T., V.S., Montreal; Dawes, M. A., V.S., St. Anne de Bellevue; Dillon, Gerald P., V.S., Toronto, Ont.; Dyer, Charles E., V.S., Sutton, P.Q.; Goddard, A. J. G., V.S.; Hall, Wm. B., V.S., Quebec, P.Q.; Harris, A. W., V.S., Ottawa, Ont.; Harris, James G., V.S., Duluth; Hinkley, Nelson P., V.S., Buffalo, N.Y.; Hoare, Edward W., V.S. and M.R.C.V.S., Cork, Ireland; Jakeman, William, V.S., Halifax, N.S.; Lemay, Daniel, V.S.; Lyford, C. C., M.D., V.S., Minneapolis, Minn., U.S.; McCormick, Archibald, V.S., Ormstown, P.Q.; McEachran, Professor Charles, V.S., Montreal; McLellan, Frederick W., V.S., Bridgeport, Conn., U.S.; McWhinnie, Hy., V.S., Troy, N.Y., U.S.; Miller, John A. V.S., Storm Lake, Iowa; Munro, Malcolm, V.S., Lancaster, Ont.; Mylne, R. C., V.S.; Ormond, Chas. H., V.S., Milwaukee, Wis.; Parker, John M., V.S., Montreal; Sangster, Geo., V.S., Huntingdon, P.Q.; Simpson, Martin W., V.S., Greenfield, Mass.; Skaife, F. W., V.S., Montreal; Smith, Henry D., V.S., Montreal; Thomas, Flavel S., M.D., Ph.D., V.S., Hanson, Mass.; Torrance, Frederick, B.A., V.S., Brandon, Man.; Wardel, Walter, V.S., Aqueduct St., Montreal; Wroughton, Theodore Ambrose, V.S., Fort McLeod, N.W.T.

SESSION OF 1889-90.

Crossman, Geo. E., Brushton, N.Y., U.S.; Darling, Andrew, Montreal; Hayman, Julian M., Boissevin, Man.; McGlue, John, Lynn, Mass., U.S.; Mills, Professor Wesley, M.A., M.D., McGill College; Scanlan, Henry, Montreal; *Scott, James F., St. Michel, Montreal; Walsh, R. N., Huntingdon, P.Q.; Willyoung, Lester E., Albion, N.Y.

* Cannot receive the degree until he is of age.

Dr. Scanlan was then called on to read the Valedictory, and the Dean addressed the graduates :—

Before addressing himself specially to the graduates, he referred to the branches of scientific study to which his Faculty was devoted, and traced the rise of Veterinary Science from the earliest time, until now it is competent to rank side by side with human medicine. It embraced the study and comparison of the anatomy, physiology and diseases of animals, with those of the highest type of animal—man. Of necessity, the study was confined more particularly to domestic animals, in which field of study they had a most comprehensive one, when it was considered that medical science, in all its collateral branches and sub-divisions of study, had to be considered in relation to the different classes of domestic animals. Looked at in a still broader light, when we consider that in Canada alone there are about 1,165,288 horses and 3,866,479 cattle and other horned animals, worth, in the aggregate, say \$200,000,000, and representing no small proportion of the country's wealth, and knowing, as we do, that everyone of these animals is, like ourselves, liable to accidents and diseases, many of which are preventable, many curable, surely the ministers to these animals in sickness, from a pecuniary point alone, ought to be men well grounded in medical science. Day by day the sciences of Human and Comparative Medicine were becoming more closely united and more and more dependent upon one another. The day was not far distant when a course on Comparative Medicine would form a part of the curriculum of every medical school. He next paid a glowing eulogy to McGill College, which had done so much for learning throughout the country.

Speaking to the graduates, he said :—Gentlemen,—You have now completed the curriculum prescribed for you, and have been admitted to the degree of Doctor of Veterinary Science. This you have gained after a hard course of study, and having passed most searching written and oral tests, by independent examiners appointed by the Government, as well as the examinations prescribed by the University.

Presumably, therefore, you are qualified to practice; I believe you to be so. Your examiners declare you so, this great University announces you so. Now, gentlemen, do not imagine this memorable day in your lives is to mark the end of your studies; by no means.

During your pupilage you have had but little time to familiarize yourselves with the literature of your profession other than your text-books. It will now be your duty to do so. To keep pace with the rapidly-evolving science of Medicine, you must

be constant readers of scientific journals and new publications, not alone those directly bearing on your own particular profession or science, but on all co-lateral subjects. There is no profession which requires in its members so varied a store of general knowledge as does yours.

In the daily walks of life you will come in contact with all classes of society, and all degrees of rank and station. You will be expected to have a general knowledge more or less extensive, and be expected to engage in intelligent conversation on almost every conceivable subject which happens to be of particular interest to each special client. Thus, the advanced farmer leads you into discussions on "Silos," on feeding standards, the relative merits of this or that breed of cattle, horses, sheep, or swine.

The sporting man imagines that you should know all winners and pedigrees of noted horses. The politician expects you to be thoroughly conversant with the bills before the house, and will be surprised if you admit that you do not wade through Hansard regularly.

It is your duty, therefore, to be a student of everything around you; be observant, and gather information from every source possible. Make it a habit, on every occasion, when you are asked for information which you cannot impart from want of knowledge, note it down, and go to your library and inform yourselves of it for future use. So in your practice acquire a habit of noting cases, record every case of more than passing interest, and study the subject carefully, read every available standard author on it, and in the light of knowledge so obtained, applied to the case under observation, you will soon become masters of your profession.

Never miss an opportunity of making a post-mortem examination; nothing aids a man so much in making a correct diagnosis as the repeated corrections and errors disclosed by a post-mortem examination. Never waste a pathological specimen, think how much good others may gain who succeed you as students of Comparative Medicine, from even one specimen, accompanied by a carefully recorded history. Museum specimens, accompanied by histories, are of great service in illustrating didactic lectures.

In your practice acquire the habit of careful clinical inspection, and ever remember that your patients, though dumb, are in all things like as we are—they hear, see, feel, smell, taste, suffer pain, and enjoy pleasureable emotions just as we do. Deal with them in the full consciousness of these facts. Do not frighten them either by voice or look, never cause even the slightest pain that you can prevent, and never nauseate them

by medical compounds such as you would consider it barbarous in a physician to prescribe for yourself.

In surgical operations, do not forget the sentient nerves which ramify in every part of the body, employ every means in your power to lessen the suffering in necessary operations; too little use is made of the valuable discoveries applied to lessen human suffering—local and general anæsthetics.

In your fees be moderate—by no means undervalue your professional services—but be satisfied with fair, moderate charges.

Acquire prompt business habits, keep engagements punctually; nothing drives friends and clients away so quickly as inattention to engagements.

Collect your accounts regularly, pay your own debts promptly, and avoid debt as you would a quicksand.

Gentlemen, in going out into the great world, do not suppose that you will not have to meet with opposition and discouragements; but meet them manfully; and let me assure you, that with your scientific attainments, and by unimpeachable conduct, by industry, sobriety, and fair dealing with all men, you need have no fear for the future.

The importance of your profession is daily becoming more and more understood; if you fail, blame not your profession, but blame yourselves, and never forget that, under no circumstances, can your profession disgrace you—but you may disgrace your profession.

Choose for your companions those only who are enlightened and refined; let your reading and your conversation always be elevating in character.

In all things be gentlemen; live as gentlemen, talk as gentlemen, and dress like gentlemen.

Much more might profitably be said on your duty to yourselves, to your clients, to your profession, and to your Alma Mater, but time forbids.

In conclusion, therefore, gentlemen, on behalf of your teachers who, we trust, you will consider your life-long friends, I say to you “God-speed.” We send you forth into a wide field of scientific usefulness, in which we trust some of you, at least, will become eminent and successful men, honored and respected by your fellows and confreres. We will watch your progress as fathers do their children, and never forget that we look to you, who are the first University graduates of this Faculty, to uphold the reputation of your Faculty, and this great University, of which it forms a minor part.

In the name of the Faculty, I beg to tender our thanks to the Provincial Government for their liberality in continuing to

give us an annual grant, to those gentlemen who constitute the Board of Examiners, who have travelled long distances in order to assist us, and to this great assembly, for your patience in listening to these remarks.

The Principal congratulated the Convocation on the successful close of the Medical Session, and on the accession of a new, vigorous and useful Faculty to the University. He expressed regret that a representative of the Provincial Government, who was expected to honour the Convocation by his presence, had been unable to attend.

Rev. Principal MacVicar then pronounced the benediction.

II.

FACULTIES OF LAW, APPLIED SCIENCE, AND ARTS, (APRIL 30TH.)

In view of the expected presence of His Excellency the Visitor, it was decided, some time ago, by the Governors and Corporation to hold the Convocation for all of the above Faculties in a large public hall, and to condense the whole into one afternoon.

The Windsor Hall having been selected for the purpose, it was arranged that the Convocation should assemble in the ante-rooms of the hall, and proceed thence to the platform or dais extemporized for the occasion. Seats were reserved for the graduating classes and students in the immediate front of the dais, a portion of the hall in rear of these was set apart for guests having tickets, and the remainder was left open to the public.

Some difficulties necessarily occurred in marshaling the procession, owing to the new circumstances, and the arrangements in the hall were, to some extent, interfered with by the unexpected fact that this large room, capable of accommodating 1,500 persons, was actually crowded with about 2,000, many of whom arrived more than half an hour before the proceedings began.

The procession of Convocation was formed punctually at half-past two, and as it entered the hall the University Musical Association, under the guidance of Mr. Bohrer, sang with excellent effect the "Soldiers' Chorus," from Faust, while the audience rose as His Excellency the Governor-General, accompanied by the Chancellor, passed up the aisle which had been kept open for this purpose.

His Excellency, as Visitor, occupied the chair of State, having on his right the Chancellor, and on his left the Principal, the members of Convocation and distinguished guests occupying the space at either side. Among those present on the dais were :—

Mr. J. H. R. Molson, Sir Joseph Hickson ; Messrs. John Molson, W. C. McDonald, Hugh McLennan, George Hague, E. B. Greenshields, and S. Finley—Governors ; Prof. Alex. Johnson (Vice-Principal), Dr. Robert Craik, Dr. H. A. Howe, Rev. Dr. Cornish, Mr. J. R. Dougall, Rev. Prof. Murray, Prof. B. J. Harrington, Rev. E. I. Rexford, Rev. Dr. Henderson, Prof. J. S. Archibald, Q.C., Dr. George Ross, Mr. John S. Hall, Q.C., M.P.P., Dr. F. W. Kelley, Rev. Dr. Barbour, Prof. N. W. Trenholme, Q.C., Rev. James Barclay, Dr. T. A. Rodger, Mr. J. H. Burland, and Dr. D. McEachran—Fellows ; Dr. D. C. McCallum, and Mr. Justice Wurtele—Professors emeriti ; Chief-Justice Johnson, Mr. Justice Davidson, Mr. Justice Cross, Mr. Justice Loranger, Mr. Justice Taschereau, Mr. Justice Jette, Mr. Justice Tait, His Lordship the Bishop of Algoma, Rev. Principal Adams (Lennoxville), Rev. J. A. Newnham, Prof. Darey, Prof. Penhallow, Dr. Wm. Gardner, Prof. C. E. Moyse, Prof. C. H. McLeod, Dr. L. H. Davidson, Dr. Jas. Stewart, Dr. George Wilkins, Prof. Chandler, Prof. T. Wesley Mills, Dr. J. C. Cameron, Rev. Prof. Coussirat, Dr. A. J. Eaton, Mr. Arch. McGoun, Mr. Paul T. Lafleur, Dr. W. G. Johnston, Miss Helen S. Gairdner, M. Ami (Ottawa), Dr. Trenholme, Mr. J. W. Brakenridge, Mr. C. J. Fleet, Mr. W. J. White,

Prof. M. Hutchinson, Q.C., Rev. Canon Ellegood, Rev. Dr. Shaw, Sir James Grant, Mr. H. Abbott, Q.C., Mr. James Ferrier, Mr. J. Naismith, Mr. N. T. Rielle, Mr. R. S. Weir, Mr. W. McLea Walbank, Mr. E. H. Hamilton, Mr. George Edwards, Mr. M. Hersey, and a number of graduates, including several lady graduates.

The Graduates' Society of the Ottawa Valley was represented by Sir James A. Grant, M.D., K.C.B., President; Mr. J. H. Burland, B.A.Sc., Mr. H. M. Ami, M.A., Dr. R. Bell, and Mr. G. F. Calders, B.A.

It had been hoped that Sir J. A. Macdonald would have been one of the guests. This proved impossible, but Lady Macdonald was present, and was seated with the ladies of several of the Governors and leading officers of the University in the reserved seats.

The meeting was opened with prayer by Rev. Prof. Clark Murray.

The Chancellor, Sir Donald A. Smith, in his opening address, referred to the presence of Lord Stanley, the Representative of the Queen, the worthy descendant of an illustrious house that had done great and good service to the Empire, the Governor-General of this great Dominion, which is destined to become greater and greater every year. Sir John Macdonald was, unfortunately, unable to be present, but he was glad to see that Lady Macdonald had honored them with her presence. It was the aim and desire of everyone connected with McGill that it should hold a still higher position among the schools of learning, not only on this Continent but in Europe. They were proud of the position which it already holds. Starting from a very small beginning, it had, in the last five years, advanced by leaps and bounds. He referred to the numerous generous gifts that had been made to the University. To Mr. Wm. Molson they were indebted for the Convocation Hall, which, in those days, was sufficient for their necessities, but was far too small, to-day, for their wants. He most cordially welcomed His Excellency, and esteemed it a great honor to have him among them.

FACULTY OF LAW.

Prof. Trenholme, Q.C., LL.D., was then called on, as Dean of the Faculty of Law, to introduce the business of that Faculty. He congratulated them on the presence of the distinguished nobleman who is the Governor-General of the country and the Representative of Her Majesty. Referring to the magnificent donations that had been made to other Faculties, he touched upon the disadvantages under which the Faculty of Law labored. The laws in this Province differed from those of the rest of the Dominion, so that for pupils they were limited to the Province of Quebec. Even here, the people were of different races and languages, and they constituted only the minority. Thus the supply of students was so small that the fees were not sufficient to support the Faculty, and it was a question whether they would have to give up Jurisprudence or support the Faculty of Law. It was in this crisis that a merchant friend showed his appreciation of law by coming forward with a princely donation. He was proud to see a practical people like ours determined to maintain law schools. Among the law schools of other universities he did not see a single endowment which equalled that which Mr. McDonald had given to us. Addressing the students, he said :—Let them be true to themselves, and they would be true in the best sense to their Alma Mater. He closed by urging them to be honest and upright citizens as well as diligent and studious professional men. He then read the list of those who had attained the B.C.L. degree, which was as follows :—

Warren A. Kneeland, Montreal ; George P. England, Dunham, Quebec ; Desire H. Girouard, Montreal ; Thos. J. Vipond, Montreal ; Alfred E. Harvey, Stanstead ; H. R. Pelletier, Marieville, Que. ; John D. L. Ambrose, Montreal.

The list of medals, prizes, and honours having also been read, the successful candidates were called up, and received their distinctions from the Visitor and the Chancellor.

The graduating class was called up to the front of the platform and the declaration administered, when the degree was conferred in the usual manner by Principal Sir William Dawson.

Mr. A. E. Harvey, B.C.L., then read the Valedictory.

FACULTY OF APPLIED SCIENCE.

The Principal then expressed his regret that an accident, fortunately not of a serious nature, prevented the Dean of the Faculty of Applied Science from being present, and from announcing the great benefactions made to that Faculty, but a printed statement of these had been distributed in the hall, and Dr. Harrington would announce the results of the examinations.

Dr. Harrington shortly referred to the bequest of the late Mr. Thomas Workman of \$120,000 to found a department of mechanical engineering and to provide the necessary workshops, and the stimulus given by this announcement influencing many of our citizens, who are directly or indirectly connected with the industrial arts and trades, still further to aid in extending the work of the faculty, the result being numerous subscriptions, amounting approximately to upwards of \$25,000. He next referred in fitting terms to Mr. McDonald's still larger gift to erect a technical building, containing thermodynamic, hydraulic and electrical laboratories, laboratories for testing the strength of materials, museum, library, lecture rooms and drawing rooms. Work on the buildings is to be proceeded with at once, and it is expected that the workshops will be available for use early in next session. He referred to the pamphlet prepared by the Dean and to the announcement of the Faculty for further details as to the new buildings and the apparatus and appliances with which they would be furnished, which would far exceed any-

thing of the kind hitherto provided in this Dominion. He then read extracts from the report of the Dean of the Faculty, which will be formed in the Appendix.

He next read the lists of Honours and Prizes, and called up the successful competitors.

The following were then presented as having fulfilled all the conditions required for the Degree of Bachelor of Applied Science :—

IN CIVIL ENGINEERING, (*Advanced Course*).—Ernest Albert Stone ; Robert Bickerdike.

IN CIVIL ENGINEERING, (*Ordinary Course*).—Ernest Albert Stone ; William Jardine Bulman ; Robert Bickerdike ; John Edward Schwitzer.

IN MECHANICAL ENGINEERING, (*Ordinary Course*).—Henry Martyn Ramsay ; Percy Howe Middleton ; Thomas Henry Wingham ; Miles Lawrence Williams.

IN MINING ENGINEERING.—William Henry H. Walker ; Hugh Yelverton Russel.

Mr. Percy H. Evans then read the valedictory on behalf of the Graduates in Applied Science.

The Musical Association then sang the following verses, composed by a lady of the graduating class :—

Our hearts are lightened and made glad ;
 Success now reigns supreme,
 Instead of anxious doubts and fears
 Which darkened Hope's fair dream.
 But this bright glow of happiness
 Must wane as gladness will,
 When Fate demands with stern decree,
 That we must leave McGill.

'Tis true that we must leave her halls :
 But let us not forget,
 Although we must be parted now,
 We are her students yet.
 And in our life-long college course,
 We'll strive with ardour still,
 To follow all that we have learned
 As students of McGill.

FACULTY OF ARTS.

Dr. Johnson, Dean of the Faculty of Arts, before announcing the results in that Faculty, addressed the Convocation as follows :—This Convocation marks an epoch in the history of this faculty as well as of two other faculties in the university, and in view of the really extraordinary increase of our financial resources, it is desirable to say something about

its condition and progress. You will remember that the Faculty of Arts is the faculty which makes an educational institution a university. Without it there would be merely professional schools in Theology, Law, Medicine, Applied Science, and Comparative Medicine. It is the body, of which the others are the limbs; it is the heart which sends, or ought to send, the life-blood circulating through the rest of the system. When therefore, any faculty receives a great development, the importance of a proportional development of the Faculty of Arts is obvious. It is most gratifying, therefore, to find that this faculty will receive a remarkable addition along with the others, and that thus besides a fine Physics building, two new chairs will this year have been established in it—and not too soon. We are growing rapidly in the Faculty of Arts. Our present graduating class is the largest we have sent forth. There are 39 from McGill college and 4 from Morrin college, making a total of 43. The number of undergraduates is the largest we have ever had, viz., about 180. Two years ago we had only 132. We are growing by leaps and bounds as the Chancellor has said. The total number of our students is about 300—298 is, I think, the exact number,—but as we have more from other faculties attending our lectures we may reckon 360 as taking studies in Arts. As a consequence our rooms are inconveniently crowded—in fact, we suffer the penalties of rapid growth and feel what are called “growing pains.” Our rooms are too small for our students, our library too small for our books, and our Convocation Hall too small for our friends, but above and beyond all (for these statements refer merely to buildings, and brains are more important than buildings,) our professors, even with the addition of the new chairs, are too few for the number of subjects and number of classes to be taught. In another way this convocation marks an epoch. For the first time we can say at this annual meeting that this University, in

common with other universities, enjoys the same privileges, with reference to the value of its degrees in Arts, in this our own province which we have long enjoyed in other provinces and other countries. It has cost no little effort to obtain these privileges, and it is very much to be regretted that those efforts should have caused an attempt to create ill-feeling among us who live in the province of Quebec. There was no good reason for such attempt and no justification. If an exploring ship in the cause of science is by the laws of war among civilized nations free from molestation by an enemy's cruisers, how much more should universities, whose duty it is to preserve, to transmit, and if possible, to increase knowledge, be free from unreasonable animosities. That this is the general sentiment of our French-Canadian fellow-countrymen is shown by the votes in Parliament. It is a most gratifying and encouraging fact that what is called the B. A. Bill was passed by a majority who voted without distinction of race, religion or language. We owe them our thanks, not only for the justice they have done us (it is not easy always to do justice) but also for their courage in acting upon their knowledge and convictions. All honour to them.

Dr. Johnson called up the winners of medals, honours and prizes, to receive their distinctions from the hands of the Visitor and Chancellor.

He then read the names of those who had passed for the degree of B. A., the honour candidates being presented first, and afterward the ordinary in order of standing. Their names are :—

H. Inez R. Botterell, William F. Colclough, Carrie M. Derick, Daniel J. Fraser, Robert McDougall, Albert G. Nicholls, Andrew A. Robertson, Henry M. Tory, Edward C. Trenholme, Annie Williams, Maude Abbott, Peers Davidson, Elizabeth Binmore, Alexander Tolmie, George H. Matthewson, Hugh C. Sutherland, James T. Daley, John Alexander Cameron, Frederick M. Fry, Jeanie T. Botterell, Alexander R. Hall, Silas W. Mack, H. McL. Kinghorn, Wm. Thomas D. Moss, Alex. Hunter, Isaac J. Swanson, Alexander W. Walsh, Donald Mc-

Vicar, Peter L. Richardson, William D. Reid, John Parker, Alexander M. McGregor, Mira McFarlane, Wm. E. Paton, Calvin Wright Finch, Mary Henderson, Joseph J. Ross, Sara B. Scott, Charles E. Brodie, Hugh Craig, Charles DeBrisay and Duncan Anderson. The last four named were from Morrin college and were presented by the Rev. James Barclay, M. A., on behalf of that college.

The degree was then conferred on the candidates in the usual manner.

The ladies were received with much cheering, especially those who had distinguished themselves as medallists. Lord Stanley gallantly set the example of rising as each lady presented herself, and the homage of all that was great and learned in connection with old McGill to a number of simple though clever young women, was one of the interesting as it was one of the touching features of convocation.

The Chancellor then called upon Mr. D. J. Frazer, B.A., who read the valedictory on behalf of the graduating class of men, and on Miss Abbott, B.A., to read that for the class of women.

Rev. Dr. Cornish then addressed the graduates in all the Faculties as follows:—

Lady and Gentlemen Graduates:—

The proceedings of this day mark the termination of your College course.

You meet with us for the last time, in the capacity of students, and the University has now conferred upon you those academic distinctions and honours, for the attainment of which you have been for some years earnestly striving.

In accordance with our custom, it devolves upon me, on behalf of the three Faculties here represented, to offer you our hearty congratulations, and to address a few parting words to you ere we send you forth into the active duties and difficulties of life.

The fact that you have devoted some of the best years of your life to the pursuits and studies of the College, shows that you set a high value upon the training which thereby may be secured.

There may be some who think that the student, in thus giving up a portion of his young manhood for the acquisition of a liberal education, makes a sacrifice that does not find an adequate compensation in the results gained.

But no man who forms a proper estimate of the value of a liberal education, in the true sense of the term—that is to say, of the power wherewith it arms a man for future usefulness and success, and of the benefits which may be made to result therefrom to the whole community—can come to such a conclusion. As a rule, he who acts as you have done, and works as you have worked, makes a wise investment of his time and labour for future power and profit. The error of those who think otherwise lies in yielding to the tendency, too common in this age, of estimating the value of a thing by the amount of hard cash it will fetch in the market. But it is only those things that are “to perish in the using” that can be so estimated; those matters and principles which find their place and scope in the intellectual and moral life of men; I mean the knowledge and mental habits which are implied in the training of the schools, cannot be weighed in such a balance, because they have an intrinsic value of their own far surpassing that of money, and because they open up to a man avenues of beneficence and of power, which the golden keys of mere wealth can never open to him. The past and present history of the mother-country, and, indeed, of every land, wherein a liberal education is appreciated, testify to this. Think of the importance to a man of a correct estimate of his own powers and tastes in preparing him for his way in life. To how many is life a failure owing to the want of this correct appreciation of themselves, and how many social and professional anomalies are to be set down to the account of this self-ignorance?

Think, too, of the value of proper habits of work and correct methods of procedure to the man engaged

in the activities of life. The function of the University is not to teach everything that comes within the scope of human knowledge and observation, but rather by a wise selection of subjects, so to train the minds of its pupils that they may be enabled to investigate and acquire knowledge for themselves. And when you consider those walks of life upon which, as a rule, University men enter, you will perceive at once the great value there is in such training and culture. The Church, the Legislature, the Law, and the practice of Medicine demand, each and all, as the condition of honourable success in them, the highest culture, the most severe habits of thought, and the most correct methods of observation and induction.

But with all these advantages, a liberal education brings with it its peculiar responsibilities. The educated man owes duties to his fellows that devolve not upon the unlearned rustic. It should be the aim of such a man to do all he can to extend to all classes of the community the great benefits which spring from sound learning; and in young countries like ours this is particularly true. In the interests of loyalty, and of good government, and of the conservation of all that is good and strong in our national life, character, and institutions, it is expedient that every member of the community should be more and more intelligent and enlightened.

For with our principles of government, education and intelligence in the masses are essential to the existence of a rational loyalty to the powers that be, and of an unswerving fealty to law and order; without these, government, as we understand it, becomes an impossibility; and the way is open to anarchy or despotism, the legitimate offspring of national ignorance. Thus it is, that the School and the College, regarded in their proper light, constitute, with religion, the very foundation of all national greatness.

And whatever may have been the place of our birth, we are all here as the citizens of one common

country ; a country of which none need be ashamed, but rather proud, when we contemplate its progress in the past, and its capacities for greatness in the future. You will contribute to that greatness by doing all you can to make your fellow-citizens more intelligent and better through the education you have yourselves received.

And now, Mr. Chancellor, I may be permitted to advert to two or three matters, which are of such importance as to deserve special notice. As regards ourselves, the dominant note of this day's proceedings may well be that of thankfulness and congratulation. During the past year, many good things have fallen to the University, especially in the way of benefactions, whereby it has been placed upon a broader and more assured foundation for future usefulness and success than it ever enjoyed before. To one standing here, as I do, on the completion of 33 years of service, the present aspect, as well as prospect, wears a very different look from that which presented itself a generation ago ; and one is naturally tempted to indulge, as might indeed be done with profit, in a retrospective comparison, or contrast, if you will, of our present comparative strength and affluence with the weakness and poverty of those days. But whilst refraining from this, I must, however, say, that we to-day are reaping the harvest of the seed then sown by our honoured and indefatigable Principal and by the Board of Governors, who gave freely, in season and out of season, of their time and best thought and means to strengthen and build up this institution, and to awaken in the minds of their fellow-citizens a generous interest in its work and welfare. How well they succeeded, let the gifts of the many, beginning with the year 1856, and the princely munificence of the honoured dead, and of the living, in whose presence to-day we rejoice, bear testimony. And I am sure that I may, without presumption, as representing here the teaching staff of

the University, give expression to the grateful appreciation with which each and all of us regard the munificence of our benefactors which has placed at our command appliances for doing our work, of which the need had long been felt. Without indulging in extravagant eulogy, one may justly say this, that men who give of their substance, as they have given, in order to extend the advantages of higher education, and to make them more accessible to any class of the community, win for themselves, on the Bead-roll of their country's benefactors, a place second to no other in honourable distinction. They contribute to the true greatness of our common country more even than he who wins new territory by the sword, for they are laying the foundations of a power greater and more enduring in its results than that of the sword; I mean the power of knowledge and of intellectual culture. And it is to the lasting honour of this city that, in the comparatively short period covered by the history of this University, so many of its citizens should have given so freely of their time and thought and wealth to consolidate and extend the advantages of sound learning.

Before I close a note of sadness must be touched. Whilst we have been receiving our good things, a sister University, in whose commanding position of usefulness and success all lovers of learning rejoice, is mourning the loss, by fire, of her beautiful buildings, and still more precious library and apparatus. "A national calamity," was the exclamation of everyone, as the startling news was flashed across the land. As in other relationships the law holds "if one member suffers, all the members suffer with it;" so in the commonwealth of learning the same holds good;—the loss of one is the loss of all, and the joy of one is the joy of all. It is very gratifying to note the widespread sympathy that has been awakened with those who have suffered this loss; and not sympathy in words merely, but help of a material kind, which

will aid in some degree to repair the damage done, in so far as it can be repaired. Let us hope that this fiery trial, through which that honoured University has been called to pass, will prove a source of strength and a stimulus for higher things in the days to come; and that this event, untoward as it may now appear, may serve to bind, in a closer union of sympathy and of labour, our institutions of learning throughout this Dominion. For whilst they may laudably cherish an honourable ambition to surpass one another in doing the best work they can do, the aim and object of each and all alike should be to improve the condition of the community at large by the diffusion of sound learning throughout the land.

Mr. Naismith, B. A., was then called on to present the winners of the Wicksteed medals for physical culture—Messrs. Ross and Jāquays, and those of the prizes in the Donalda Department—Misses Williams and Smith.

The degree of M.A. was then conferred upon Mr. Wellington A. Cameron, B. A., and Mr. Arch. McGoun, B.A., B.C.L.

The Principal then announced that the Corporation had granted to His Excellency the honorary degree of LL.D., in recognition not merely of his position as the representative of Her Majesty, and of a family long distinguished for the pursuit and patronage of learning; but as himself a friend and benefactor of Literature and Science, who had shown himself able and willing to assume that position which had been held by so many of his predecessors, as the leader in the advance of the higher elements of our civilization.

The degree was then conferred by the Principal, and was received with cheers by the students. "Three cheers for the Doctor," said one of the students, and the cheers were heartily given.

His Excellency then addressed the Convocation to the following effect :—

He regretted that the first address he had to deliver to them might be termed a valedictory, but trusted that the word was used in no prophetic sense. It was a standing evidence of the liberality of such institutions that they should admit within their fold one who had not had the advantage of an academic career. After his eloquent predecessors, Lords Dufferin, Lorne and Lansdowne, he found some difficulty in finding a subject on which to address them. He was in the unhappy position of being called upon to say "a few words on general subjects." A gentleman who had come to Ottawa to lecture on oratory had said that it was a long time before he could emerge from the list of "and others," as the newspapers summed up the unimportant speakers. He felt sure that after his address he would subside into the "and others." He had tried to think of some new subject that had not been threshed out, and it had occurred to him that if he could formulate the difference between some humble animal, say an ascidian, and a graduate, he might hit upon an idea that would thrill the world. On second thoughts, however, it occurred to him that if he were brought face to face with the animal it would know as much about him as he would about it. Other thoughts in connection with modern ideas of development had occurred to him; but he had concluded that nothing could be more fitting than to refer to the development of our country and its educational institutions. It took as long, ninety years ago, to go by river from Montreal to Cornwall as it does now to cross the Atlantic. Now there is a network of railways all over the country. Electrical science at the beginning of the century was scarcely known in more than theory, while now messages sent from the old world arrived here before the hour at which they were sent. Hospitals and the treatment of the sick were of the most modest and imperfect description, while now there were buildings thoroughly fitted up and everything possible done for the allevia-

tion of sickness. At that time there was no telegraph, no gas and no anæsthetics. He did not know whether it was an improvement that medical science had invited ladies to take part in the work, but the question had resolved itself from one of principle to one of expediency. The growth of this University was itself an index of our progress. He could congratulate it on the wide scope of its work, extending not only to a very comprehensive course in the Faculty of Arts, but to training in so many professions—Law, Medicine, Veterinary Science, Engineering, Mining, Practical Chemistry and other applications of Science to the Arts. He felt especial interest in the Donald special course for women established by Sir Donald Smith. He spoke of the growth of that department and the success of the students as evidenced at this meeting of Convocation. He remarked, too, that out of five medals three were taken by lady students. Referring to the endowments this University had received, he said the college was the creation of the citizens of Montreal. This was an interesting instance of the union of educational and commercial interests. He referred to the permanence of educational endowments in England, through all political, social and dynastic changes, as an evidence that in this country also they would constitute the surest guarantee of the permanence of the institutions supported by them. He spoke of the ends to which the endowments were to be applied, and closed by urging the graduates to be devoted to their Alma Mater and determined to maintain her credit and reputation; to be honourable and truthful men, true sons of great sires, and worthy citizens of this great Dominion of Canada.

The Principal, apologising for detaining the meeting to so late an hour, and thanking the friends of education for the manner in which they had responded to the invitation of the University on this occasion, said that he could limit his statement to a few important statistics and announcements.

The past session of this University has in many important respects been one of unexampled growth and prosperity. The total number of students in McGill college alone has been above 700, besides 38 in affiliated colleges in Arts and 86 teachers in training. We have added a new and prosperous faculty, that of Comparative Medicine and Veterinary Science, and have received the Stanstead Wesleyan College into affiliation with the University. The liberal benefactions given to the University have already been referred to. In all, the John Frothingham Principal fund, the Thomas Workman endowment for the department of mechanical engineering, and the great gifts of Mr. W. C. McDonald to the Faculties of Applied Science, of Law and of Arts, will reach the handsome sum of about half a million of dollars, applicable directly to the maintenance and extension of the work of the University. It is true that these donations affect principally two of our professional Faculties and the scientific work of the Faculty of Arts. I do not regret this, for these Faculties and departments are eminently in need of endowments. The endowment of our Faculty of Law I regard as one of the best guarantees that the English population of this province will continue to enjoy a fair share of influence in the Judiciary, the Legislature and the Bar, and the endowment of our Faculty of Applied Science will raise it to a level with the best Science schools abroad. While some persons entertain the absurd idea that professional qualifications can be raised by erecting an arbitrary standard of examination, Mr. McDonald's and Mr. Workman's endowments proceed on the sound principle that this can be done only by providing a thorough educational foundation. This great principle, the source of our great benefactions, has also been publicly acknowledged in the recognition of the degree of B.A. by the Legislature. But it must not be forgotten that these great and liberal benefactions leave other parts of our work relatively behind. The

literary, philosophical and mathematical departments, both for men and women, and which are really fundamental in their importance, should now have their turn, and large additions are desirable in matters relating to the comfort and health of students, such as the gymnasium and dining-hall, rooms for societies and convocation room and enlarged library. The additional half million which we hope to receive from our friends in the present year, should be devoted to these and kindred purposes, and will place us in a position in which we shall be able to say that we are as well and thoroughly equipped as any university requires to be in the present condition of this Dominion. The actual work of the University in the past session is best to be measured by the graduates it has sent out. In this and the previous meeting of Convocation we have conferred in all one hundred and sixty degrees in course. Of these, 56 are in Medicine, 40 in Veterinary Science, 43 in Arts, 14 in Applied Science, and 7 in Law. Deducting higher degrees and the degrees given to veterinary students of previous years under the new regulations, the number of new graduates to be credited to the past session reaches to 130, a larger number than we have ever previously graduated, and we may safely hold, in connection with the growing facilities offered here for higher education, better trained than any previous graduating class. The sending forth into active life of so many highly educated minds may surely be held to be a great and honorable work, on which both we and the friends of education throughout the Dominion may congratulate ourselves and express our thankfulness to the Author of all good that we have been able to do so much, while hoping in the near future to achieve still greater results. These results I feel to be certain, because I have faith in education and in the constitution and methods of this University. I have ventured in previous meetings of Convocation to predict much that we see realized to-day, and I believe

that with God's blessing on honest and enlightened effort, there are those here to-day who will live to see the success of which we now boast appear as small and poor, as those early efforts of the University to which reference has already been made ; but we know that they will give us credit for the labors and struggles of the present as we remember those of the past.

The Convocation was then closed by the Rev. Canon Ellegood pronouncing the benediction.

THE CONVERSAZIONE.

In the evening about five hundred guests were invited by the Chancellor, Principal, and Fellows, to the Redpath Museum, where they were entertained by songs and music provided by the College Musical Association, under the direction of Professor Bohrer. His Excellency the Governor-General, accompanied by the Hon. Edward Stanley, was received at the door of the Museum, and conducted to the centre of the hall, where the guests were presented to His Excellency, after which refreshments were served.

The guests circulated through the museum, glancing at its treasures, and especial attention was given to the large sculptured block of granite from Bubastis, presented by the committee of the Egypt Exploration Fund, through Mr. H. R. Ives, and which forms a conspicuous object in the lower hall of the museum.

APPENDIX.

Report of the Dean of the Faculty of Applied Science on Endowments, Buildings and Subscriptions, in connection with that Faculty.

“ From the foundation of this Faculty it has been felt that a training which did not include laboratory and workshop practice was necessarily incomplete, but for many years we have been obliged to be content with the practical work which the students were

able to do in the summer months, except in the chemical department, which had been provided for by the fine laboratory erected by Messrs. Molson and McDonald two years ago. Although the University may well be pleased with the success already attained by its graduates in Applied Science, it is with no small gratification that it can now look forward to the development rendered possible by recent splendid benefactions, which will enable the student of the future to enter upon his professional career with all the advantages offered by modern research and invention. We shall now be able to give those facilities which the student has hitherto had to seek elsewhere, and he will at find at home an institution which, in each and all the departments of Civil Engineering, Mining Engineering, Mechanical Engineering, Electrical Engineering, and Practical Chemistry, will rank in point of size and equipment with the foremost of the kind in Europe or America.

In the autumn of 1889 the public received the news of the late Mr. Workman's bequest of \$120,000, to found a department of mechanical engineering and to provide the necessary workshops. The stimulus given by this announcement influenced many of our citizens, who are directly or indirectly connected with the industrial arts and trades, still further to aid in extending the work of the Faculty. Numerous subscriptions, an interim list of which is appended, have been received, amounting approximately to upwards of \$25,000.

Within the last month another benefactor has come forward, and, in addition to other noble gifts, Mr. McDonald has signified his wish to erect a technical building, containing thermodynamic, hydraulic and electrical laboratories, laboratories for testing the strength of materials, museum, library, lecture rooms and drawing rooms.

Work on the buildings is to be proceeded with at once, and it is expected that the workshops will be

available during the coming winter. The students will then have the opportunity of assisting in the installation of the machinery and the adjustment of the shafting.

The workshops are to be a three-story building, covering an area of about 9,000 square feet.

On the ground floor is to be the machine shop, containing lathes, drills, planer, milling machinery, etc., a special room being set apart for emery grinding. The first and second floors are to be devoted to wood-working, turning and pattern-making, and are to be furnished with speed-lathes, band and circular saws, etc., etc. At one end of the machine shop are the foundry and smithy, with cupola, furnaces, forges, etc. It is hoped also to add a laboratory equipped with stamps and other appliances for the crushing, dressing and amalgamation of ores, better provision for the assaying of which will probably soon be provided in connection with the chemical laboratory.

The whole of the machinery in the workshops will be driven by a compound engine, presented by Messrs. J. Laurie & Bro.

The time spent in the workshops will be from 400 to 600 hours, and the student will pass regularly from bench-work to turning, pattern-making, forging, foundry-work, and will finally enter the machine shop. The objects of this course are to familiarize a student with the tools used in wood and metal working, to give him a practical knowledge of the nature of the materials with which he has to deal, and to teach him the most approved methods of constructing machinery.

The technical building is a structure of five stories, covering an area of about 9,600 square feet. Upon the ground-floor are to be the following laboratories :
(a) A *steam* laboratory 60 x 32 feet, containing a triple compound experimental engine with dynamometers, calorimeters, injectors, graduated tanks,

and all appliances necessary for the thorough investigation of the properties of steam; (b) a laboratory for testing the strength of materials, 60 x 32 feet, containing a 75 ton Emery testing machine, presented by Mr. J. H. Burland, B.A.Sc., a graduate of the Faculty; also machines for testing the effect torsion, repeated bending, etc.; (c) an hydraulic laboratory, in which experiments will be made on the flow of water through pipes and mouth-pieces of various forms and sizes, also upon pipe friction, etc.; (d) a laboratory for tests upon cements; (e) an electrical laboratory in which will be installed the dynamos. Here experiments will be conducted on dynamic electricity, and will form a special feature of the course in electrical engineering. Ample room will also be provided for storage batteries; (f) a laboratory of uniform temperature containing a comparator, dividing engine and standard gauges.

Additional laboratories of similar character are also provided on the first floor.

The second floor is to be occupied by lecture rooms, library, students' room, offices, etc.

The third floor forms the museum, in which will be placed valuable collections illustrating mechanical principles. Through the further munificence of Mr. McDonald we already know that this museum will contain the most complete and valuable collection of models of mechanical movements on this continent. These are world-famed as the Reuleaux Kinematic collection, and their value to the student and also to the engineer can hardly be over-estimated. In time we may hope to possess, through the kindness of other benefactors, models illustrating engineering structures, and also sectional models showing the construction of machinery.

The whole of the fourth floor is to be devoted to drawing.

All the engineering students, civil, mining, mechanical and electrical, will be required to do work

in the laboratories in certain departments under the supervision of the professors. The object is to enable the students to study, experimentally, the sources of energy, prime movers, and the strength of materials, and to carry on with intelligence original investigations.

In connection with the department of mathematics and mechanics, there is to be a laboratory of mechanics, in which the student, in the early part of his course, will make various kinds of experiments, *e.g.*, will measure small intervals of time, and determine the values of certain important dynamical constants. The science of exact measurement will afterwards be still more thoroughly investigated by the aid of micro-meters, comparators and standard gauges.

A portion of the course in the department of experimental physics will be attended by all students. Special work, chiefly in the laboratories, will be done by such of the students as may desire to become electrical engineers. For this purpose, in addition to the laboratories in the physical building, electrical research laboratories, and laboratories for testing dynamos, motors, accumulators, etc., are also to be provided in the technical building.

The course in surveying is primarily designed to qualify the student for admission to the practice of Provincial and Dominion Land Surveying, and to afford a thoroughly practical as well as theoretical training in field engineering. The work embraces chain surveying, angular surveying, the use and adjustment of the engineer's transit and theodolite, levels, plane-table, and other field instruments, the methods of contour surveying and underground surveying, railway curves and setting out work, hydrographic surveying, the methods and instruments employed in geodetic surveys, and practical astronomy. The large drawing rooms are to be fitted with suitable mountings for the various surveying instruments for the prosecution of triangulation and other instru-

mental work. The construction and adjustment of each instrument is made a special study. Provision is made for a course of instruction in transit observations for time, in the astronomical observatory, and also for advanced courses in geodesy and practical astronomy, and for practice in the use of magnetic field instruments, in accordance with the course laid down for the examination for Dominion Land Surveyors. Investigation of the errors of graduated circles and absolute standards of length will be made in connection with the advanced work in geodesy.

It is not easy to put into words the gratitude which must be felt towards those who have made such enlargement possible, by all who have the interest of the University at heart. We can only hope to show it by the endeavor to put such noble gifts to the highest use. I may, perhaps, be pardoned for here expressing my great personal gratification that the development of the Faculty, which I so earnestly desired and advocated at the Convocation last year, has met with so complete a realization."

INTERIM LIST OF SUBSCRIBERS TO EQUIPMENT.

Abbott, W.; Birks, Henry; Blackwell, Kenneth; Bremner, A.; Brown, F. F.; Brush, George; Burland, Geo. B.; Burland, Jeffrey H.; Campbell, Kenneth; Campbell Tile Co., England, per Jordan and Locker; Chanteloup, E. (late); Chadwick, F.; Clendinneng, Wm.; Crosby Steam Valve Co., Boston; Date, John; Drysdale, D.; Drysdale, Wm.; Ewan, A.; Fairman, F.; Forsyth, R.; Frothingham and Workman; Garth and Co.; Gower, W. E.; Graham, Hugh; Grier, G. A.; Gurney, E. and C., and Co., per F. Massey, Esq.; Hearn and Harrison, per L. Harrison, Esq.; Hersey, R.; Hodgson, Jonathan; Holden, A.; Hughes and Stephenson; Hutton, W. H.; Ives, H. R.; Jordan and Locker; Kennedy, John; Kennedy, Wm., Owen Sound; Kerr, R. and W.; King, Warden; Knight (The) Hydraulic Co., California; Laurie, J., and Bro.;

Lawson, A. J.; Macpherson, A.; Machinery Supply Association, per Wm. S. Gardner, Esq.; McCarthy, D. and J., Sorel; McDougall, Mrs. John; McLaren, W. D.; McNally, Wm., and Co.; Miller Bros., and Toms; Mitchell, Robert; Norton (The) Emery Wheel Co., Worcester, U.S.; Notman, Wm.; Ogilvie, W. W.; Pillow, J. A.; Prowse, G. R.; Ramsay, A., and Son; Rathbun and Co., Deseronto; Reford, Robert; Redpath, Mrs; Reed, G. W.; Reid, Robert; Reid, R. G.; Renouf, E. M.; Robertson, T., and Co.; Robertson, James; Ross, James; Sadler, Geo. W.; Scholes, Francis; Scovill Manufacturing Co.; Shearer, James; St. George, P. W. Tees and Co.; Twyford and Co., England, per Messrs. Jordan and Locker; Walker, James, and Co.

