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THE
APPLIED SCIENCE GRADUATES SOCIETY

—OF—

MCGILL UNIVERSITY.

Annual report

1st.

Montreal, Que.

HAMILTON:

H. A. Martin, Book and Job Printer, 14 John Street North,
1896

THE
APPLIED SCIENCE GRADUATES SOCIETY

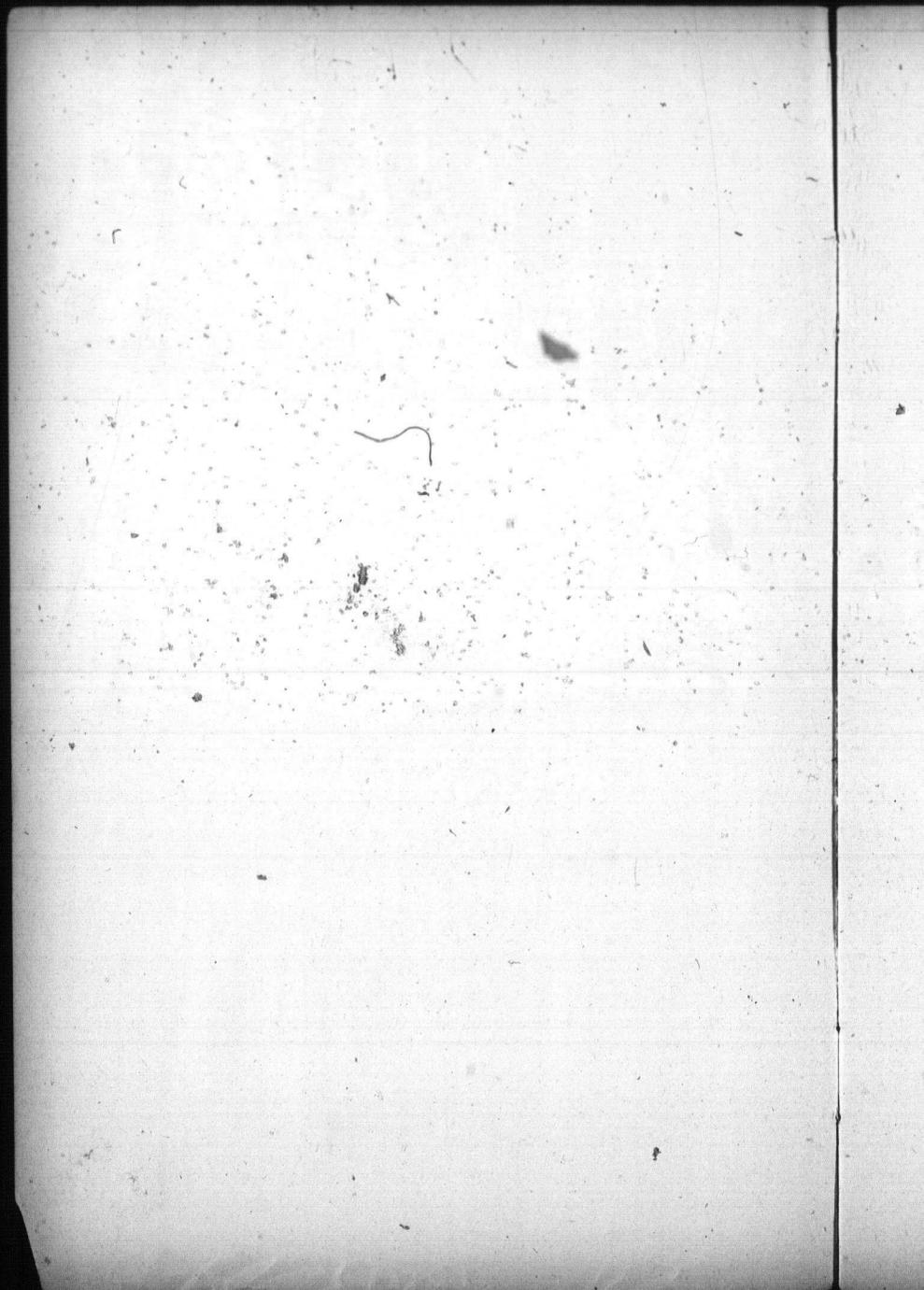
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The
Applied Science Graduates Society
OF
McGill University.

BY-LAWS.

1. The name of the society shall be "The Applied Science Graduates Society of McGill University."

2. The objects of this society are:—

(a.) To promote closer relationship amongst the graduates of this Faculty in every desirable way—to keep an accurate account of the whereabouts and occupation of every graduate and endeavor, wherever possible, to obtain positions, especially for the younger graduates.

(b.) To induce greater interest in the graduates of the faculty on the part of the faculty itself, by distributing occasional bulletins containing results of experiments and tests made in the laboratories, and by inviting the attendance of graduates when events of interest are to take place in the college, and by any other available means.

(c.) To establish an Applied Science Library Endowment Fund to which all Applied Science graduates are invited to give voluntary subscriptions, the fund to remain in the possession of the society and the interest to be expended, yearly, by the committee of the society in purchasing books to be presented to the library of the faculty; the committee to receive suggestions from the library committee of the faculty and also from the graduates themselves, by means of a suggestion book to be kept by the secretary.

3. The officers of the Society shall be:—Honorary President, President, Vice-President; A resident committee of six, composed of a graduate from each department, and the Secretary and Treasurer, one member of the committee to be preferably the Corresponding Secretary of the most recently graduated year; a non-resident committee, living in prominent centres of Applied Science graduates, and a Secretary and Treasurer.

All the officers must be graduates of the Faculty, except the Honorary President and shall be elected each year at the annual meeting.

(a.) A Nominating Committee of (5) five members elected annually, by ballot at the same time as the officers of the ensuing year, shall draw up a list of names of such voting members, as in its opinion, are qualified to fill the offices of the Society, this list shall be furnished the Secretary, who shall send it out as a letter ballot, and at the same time a blank for the Nominating Committee for the following year.

(b.) The member of the Nominating Committee receiving the highest number of votes shall be chairman, (in case of a tie vote, the chairman shall be named at the annual meeting) and shall report to the Secretary not later than the 1st of March in each year, a proposed list of officers, for the ensuing year, as mentioned in previous by-law.

The Nominating Committee will necessarily meet only by letter.

4. There shall be an annual fee which will be fixed, at present, at \$1.00 per year.

5. There shall be a yearly meeting and any other special meetings if necessary. All meetings shall be called by the Committee and the yearly meeting shall be held about the time of convocation and shall be made as interesting as possible by having addresses from prominent graduates and professors, and if it is found desirable, be published in a yearly journal. At yearly meetings, reports from non-resident members of Committee will also be read.

Minutes of Annual Meeting, April 22nd, 1896.

The meeting was held in the Engineering Building, McGill College.

The minutes and meeting of June 10, 1895 were read and adopted.

The report of committee was then read and adopted. The adoption of report being moved by Mr. Edwards, seconded by Mr. Lovelace. The following changes of by-laws were then made:

(1.) Moved by Mr. Lovelace, seconded by Mr. Stone. "That a Nominating Committee of (5) voting Members, two of whom shall be residents of Montreal, two residents of Canada outside of Montreal, and one resident of United States, elected annually by ballot at the same time as the officers for the ensuing year, shall draw up a list of names of such voting members as, in its opinion, are qualified to fill the offices of the Society, this list shall be furnished the Secretary who shall send it out as a letter ballot, and at the same time a blank for the Nominating Committee for the following year." Moved an amendment by Mr. Larmonth, seconded by Mr. King. "That the Nominating Com-

mittee be unnamed as to locality." The remainder of the by-law to remain as in the original motion. Amendment carried.

(2.) Moved by Mr. Larmonth, seconded by Mr. King. "That the member of the Nominating Committee receiving the highest number of votes shall be chairman and shall report to the Secretary not later than the 1st day of March in each year. This report shall contain a proposed list of officers for the ensuing year, as mentioned in previous by-law. The committee will necessarily meet only by letter, and in case of a tie vote in the election of chairman the annual meeting shall name him." Carried unanimously.

The by-laws just passed were suspended for the remainder of the evening and the officers elected, by the meeting, for the following year. Messrs. Pitcher and King acting as Scrutineers.

Moved by Mr. Denis that a vote of thanks be tendered to the retiring officers. Carried unanimously.

Moved by Mr. Pitcher, seconded by Mr. McKenny that the President's address, about to be delivered, be afterwards printed. Carried unanimously.

The retiring President, Mr. W. J. Sproule, then delivered his address after which the meeting adjourned.

Applied Science Graduates Society 1st Annual Report of Committee at Annual Meeting,

April 22nd, 1896.

Since the formation of the society on June 3, 1895, there have been 79 members joined of whom 71 have paid their yearly fee (\$1.00) and 38 graduates have subscribed \$92.00 towards a permanent endowment fund to the Engineering Library. The expenses to date for printing, postage, etc., have been \$48.97 besides a few dollars outstanding accounts, the library fund is at interest in the bank at 3 per cent.

The present members have graduated in the following years, showing the general interest taken in the society. 1860 (1), 1861 (1), 1873 (3), 1874 (2), 1875 (2), 1876 (1), 1877 (5), 1878 (1), 1880 (0), 1881 (0), 1882 (1), 1883 (2), 1884 (3), 1885 (5), 1886 (2), 1887 (3), 1888 (6), 1889 (2), 1890 (4), 1891 (4), 1892 (1), 1893 (7), 1894 (7), 1895 (15). Honorary 1. Total 79.

These members and the graduates of the faculty whose addresses are known are located as follows:

REPORT OF COMMITTEE AT ANNUAL MEETING.

| | | |
|----------------------|----|------------|
| Montreal | 34 | out of 63. |
| Quebec Province..... | 3 | " " 17. |
| Ontario | 13 | " " 42. |
| N. B..... | 2 | " " 3. |
| N. S..... | 0 | " " 3. |
| P. E. I..... | 1 | " " 2. |
| Manitoba..... | 1 | " " 4. |
| N. W. T..... | 1 | " " 2. |
| B. C..... | 5 | " " 12. |
| U. S. A..... | 19 | " " 59. |
| Elsewhere | 0 | " " 6. |
| | 79 | " " 213. |

LECTURES.

During the college session a course of lectures has been carried out under the auspices of the society, through the kindness of the college authorities, the use of a room and when necessary, a lantern, have been granted, and the use of a room for holding committee meetings. These lectures, delivered by old graduates, are doing something toward interesting the lecturers in their alma mater, promoting closer friendship amongst graduates, and providing matter of interest to the graduates and also to the undergraduates.

The lecturers and subjects were as follows:

January 10, 1896. Mr. St. George J. Boswell. "The Engineer of To-day."

January 28, 1896. Prof. Frank D. Adams. "The Mineral Resources of Canada."

February 14, 1896. Mr. Wm. Smail. "The Manufacture of Iron." Illustrated by lantern slides.

March 6, 1896. Mr. Henry K. Wickstead. "Railway Designing."

April 2, 1896. Mr. Robert Bell, M. D. "The Forest Timbers of Canada." Illustrated by lantern slides.

All were well attended, and the lectures themselves are being published in the "Canadian Engineer" and copies of the paper distributed free to all members of the society.

The following lectures have already been provided for next winter.

1. Mr. J. A. L. Waddell. Four Lectures on Bridge Designing.
2. Mr. D. Ogilvy. "The Relation of Architecture to Engineering."
3. Mr. G. H. Frost. "Sewage Disposal."
4. Mr. Henri Herdt. "The Manufacture of Glass."
5. Mr. Geo. Edwards. "Paint Preservation of Iron."
6. Dr. Robert Bell.
7. Mr. J. S. O'Dwyer.
8. Mr. N. N. Evans.

CIRCULARS.

During the last six months, two circulars (one four page, one six page) have been issued to all graduates, which have contained items of interest around the college. These, together with the lectures will, it is hoped, form, after this year, a small annual semi-annual or quarterly journal to which graduates will be invited to contribute anything of interest in any work they may be engaged on.

HISTORY BLANKS AND ADDRESSES.

The committee has since last June done an enormous amount of work in obtaining the correct addresses of the graduates, annual Ap. Sc. announcements were mailed to each one in 1895 and a constant revision goes on in an endeavor to keep a correct list of the addresses of graduates.

The committee appeals to all graduates to send a postal card, at least to the Secretary whenever they change their addresses or occupation.

In anticipation of a journal the committee has sent out History Blanks, to be filled in, so that a detailed history of the post graduate life of every graduate might be published in the 1st issue of the journal this has so far been responded to by 30 or 40 and it is hoped that all graduates may place their professional history on record with the society.

POSITIONS.

Not the least valuable result that is to be looked for in connection with the work of this society is the question of securing positions for one another.

Other Engineering Schools are well organized in this respect, and it is confidently expected that after some missionary work has been done, we may look for active support from our fellow graduates. Already several positions have been obtained through the influence of this society, and we have received generous promises from many old graduates in prominent positions that their young fellow graduates of McGill shall have preference in new appointments.

PRESENTATION OF BOOKS.

On February 19, 1896, the society received from the publishers of the "Canadian Engineer" a gift of 284 numbers, 1894 and 1895, of the following technical papers. "Industry," San Francisco, (5). "Paving and Municipal Engineering," Indianapolis, (10). "The Surveyor and Municipal and County Engineer," London, Eng. (40). "Electrical Engineer," N. Y., (48). "Engineering Record," N. Y., (73). "Engineering and Mining Journal," N. Y., (108). These volumes were presented to the Engineering Library, of McGill College, and a letter of thanks received in reply. In view of this and the smallness

of the amount of interest yet accounted on the Library fund [about \$2.00], it is thought best to wait until next year before presenting any book or books to the said library, as it would be the society's desire to present some work which would be a credit to themselves and the library.

EXPENSES.

The committee have thought it advisable in the interest of the society to send their circulars, invitations to join, and other literature to all graduates of the Faculty for the 1st season. This has entailed somewhat increased expenditure, yet the fee was found sufficient for all purposes. It is not intended, however, in future to send anything to those who are not members of the society, and it is hoped that this saving and the increased receipts from large membership will enable the committee to have sufficient funds for the publication of the journal already referred to. It is believed that it may become a channel for out side contributions and serious thought of graduates and professors, such as will give it a permanent value, not now possessed by anything published in this university.

OFFICERS OF THE SOCIETY.

| | 1895-96. | 1896-97. |
|--------------------------|-----------------------|---------------------|
| Honorary President..... | Prof. H. T. Bovey.... | Prof. H. T. Bovey. |
| President..... | Mr. W. J. Sproule.... | Prof. C. H. McLeod. |
| Vice-President..... | Mr. M. L. Hersey.... | Mr. M. L. Hersey. |
| Secretary-Treasurer..... | Prof. C. B. Smith.... | Prof. C. B. Smith. |

RESIDENT COMMITTEE.

| | 1895-96. | 1896-97. |
|---------------------|----------|-------------------|
| Messrs: | | |
| J. M. McCarthy..... | | D. Ogilvy. |
| T. W. Lesage..... | | H. Herdt. |
| W. A. Carlyle..... | | W. A. Duff. |
| R. F. Ogilvy..... | | S. F. Rutherford. |
| H. T. Barnes..... | | H. T. Barnes. |
| R. McDunnough..... | | |
| Wm. Currie..... | | |

NON-RESIDENT COMMITTEE.

| | 1895-96. | 1896-97. |
|--------------------------------|----------|---------------------------------|
| Messrs: | | |
| Chipman, Toronto..... | | Chipman, Toronto. |
| Smart, Galt..... | | Bell, Ottawa. |
| Dowling, Ottawa..... | | Boswell, Quebec. |
| Boswell, Quebec..... | | Scammel, St. Johns, N. B. |
| Addie, Sherbrooke..... | | Naismith, Glace Bay, N. S. |
| Morris, St. Johns, N. B..... | | Bulman, Charlottetown, P. E. I. |
| Naismith, Glace Bay, N. S..... | | Stewart, Winnipeg. |
| Palmer, Victoria, B. C..... | | Carlyle, Victoria. |
| Stewart, Winnipeg..... | | Matheson, Colorado. |
| Matheson, Colorado..... | | Ball, Lemont, Ill. |
| Graham, Chicago..... | | Gunn, New York. |
| Childs, Philadelphia..... | | Childs, Boston. |
| Gunn, New York..... | | |

The President's Address

Is always an imposing phrase and something of importance is expected. This makes a president's address difficult. Much is required even from him to whom little has been given. This is the difficult position in which I find myself to-night. My road has been paved with good resolutions whether or not it be leading to the terminus to which that kind of pavement is said to lead. When nearly a year ago this society was formed and I received the very flattering compliment of being made its first president I made two good resolutions, one to work hard for the society, the other to prepare an annual address worthy of its first annual meeting. The first resolution was good and feasible, the second good but rash. I could have worked hard for the society but alas, have not, and have not prepared a worthy address possibly because I could not, but the thief procrastination has not allowed me even to try.

This is the age of societies, of guilds, associations, clubs, conventions, federations, corporations, unions, orders, circles, synods and conferences, and they have their annual meetings and their president's addresses. It is surprising then, that in a president's address there should be found "nothing new under the sun." The choice of a subject for an address is as difficult as the epic poet's choice of a "subject for heroic song, long choosing and beginning late." Fortunately the dimensions of an address are not necessarily proportionate to the dimensions of the subject. One address may review the entire field of engineering for the past year and present a panorama of brilliant achievements such as dazzle the imagination. Another traces the history of a great transcontinental railway and fills us with wonder. Another treats of the structures on a single line of railway and our surprise is unabated. Yet another finds sufficient scope in describing the developments of the steel rail industry alone and still we find ample scope for our appreciation and admiration.

The subject should be in other hands to-night. One of the first graduates, in applied science, from McGill should be speaking to you. He could review the tidy period of a quarter of a century from the time he entered old McGill. But failing this I shall ask your not too critical attention, to a few thoughts suggested by the history of engineering during the last twenty-five years. This is the age of university engineering, and the hands and brains that, in the next quarter of a century will plant the mile stones of engineering progress, have in the last quarter begun, to fashion these monuments in college halls. It was my intention to give in this address a summary, more or less in detail of the careers of all graduates in applied science up to date. This would be interesting and no doubt instructive and the secretary has well begun the collection of the necessary

data. But without details we can compare the position of the graduate of to-day with that of the graduate of twenty years ago. The graduate of to-day goes out with a credential that is recognized as of value almost by everyone. Twenty years ago a degree in engineering was rather a dangerous thing to handle in dealing with not a few of the prominent engineers of that time. It was like that class of weapons that are liable to go off the wrong way. I well remember being advised in applying to a prominent engineer for employment, not to say anything about being a college graduate in engineering. There may be cases of the same kind yet. Such men die hard. But as a rule a graduate is now accepted as a man whose training is of substantial value to those requiring engineering assistants. This is a great step in advance which graduates of the present time should appreciate. It is not out of place to ask why this change of sentiment has come about. We might jump to the conclusion that the work already done by graduates has been such as to produce this change of sentiment. But we must not allow such a flattering explanation undue weight. While we believe graduates, in general have given a good account of themselves we must remember that the general advance of science has in late years rapidly borne down the indifference to or contempt for college graduates that existed in some quarters twenty years ago. Nor should we ignore the fact that part of the contempt may have been incurred by graduates who claimed too much for their college training. Probably some graduates believed themselves to have been transformed into engineers by the magic tap of the mortar board and the possession of the coveted sheep skin rolled up in the regulation japanned tin tube, while these credentials only testified that their possessor had received such a training as to enable him intelligently and rapidly to absorb that practical knowledge which makes the practical engineer. The sooner graduates learn to put a proper estimate on their attainments and the sooner practising engineers and the public learn to give graduates proper credit for their attainments, the better will it be for all concerned. In this connection it may be instructive to compare engineering with other professions in respect to the provision that each makes for the protection of the public. The Canadian Society of Civil Engineers requires ten years of actual practice in the profession, five of which must be spent in responsible charge of works before admission to full membership is allowed. The majority of other professions do not require half this length of probation. But engineers have been organized only nine years in Canada. This likely accounts for the fact that, as yet they do not receive that recognition and practically that respect that are commanded by other professions such for instance as law and medicine, and in consequence receive a much lower remuneration for their services, although the expenditure of millions of capital and the safety of as many lives are in their hands. Occasionally a corporation, like a repentant sinner, offers for engineering advice a fee that it thinks is proportional to the information it expects to receive, such for instance was the case recently

when the people of Toronto paid an engineer \$15,000 to come across the sea and tell them that their own engineer had already told them the best thing to be done. This profuse appreciation of an engineer followed at but a short interval of time the case where Toronto city engineer found it necessary to resign his position or else submit to the dictation of ward politicians as to who were or were not suitable persons to be employed on the engineering staff. Thus engineers seem to be the toys of popular whims, ignorance, prejudice or dishonesty like the unfortunate child that in turn receives caresses and cruelties. This is not a very pleasing picture and not one that a speaker would often paint out to the audience he wishes to please. It would be much more gratifying to be told that we belong to a noble profession, that our influence is great, that the community hang on our look or follow our beck with cheerful acquiescence. but this would not be quite so true. Granting that the condition of our profession given, although perhaps overdrawn is practically correct, three questions present themselves, viz:—Why does this condition exist, should it exist, and if not what is the remedy? The condition is fatal to the engineer's usefulness and should not exist. If the employer has not confidence in, and respect for his professional adviser the latter's work is made much more difficult and the best result may not be attained just as the patient's confidence in his physician often contributes more to his cure than medicines. The cause of the unsatisfactory status of engineers is in the engineers themselves. Circumstances have contributed to this fault. Twenty years ago there were but few engineers in private practice. The great majority were the employees of companies or corporations engaged on a fixed salary. In such positions the chief engineer is looked to for the greatest amount of results with the least expenditure. The interests of his professional assistants in this respect are opposed to his own. Their interest demands increased remuneration. The chief's interest is to make their remuneration as small as possible. Their interest lies in becoming familiar with all information connected with the company or corporation so as to fit them for the best positions. His is to monopolize in himself all information that makes him valuable to the company and gives him more influence with it, and to allow his assistants only such information as will make them useful to himself. Thus the profession is divided against itself. In time the chief departs for a new position, on earth or elsewhere, and his assistant, perhaps scarcely known to the executive officers of the company is considered fit only for an assistant and a new chief is, perhaps imported, for, often in these matters as in the beauties of nature and art "distance lends enchantment to the view." That organization for mutual defence should not exist under such circumstances is not surprising. True in many cases the relations of chief and assistant given here would not apply, but that the constant tendency exists, there is no doubt and that on the whole it produces results is certain.

The increase of the number of engineers in private practice has relatively diminished the effect of chief and assistant on large work

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but it has introduced another element that threatens to be quite as detrimental, viz:—The cut-throat competition and almost desperate attempts to secure employment and especially the pernicious practice that is becoming so general, that of competitive bidding for professional employment, the remuneration being a certain percentage of the sum of money to be extended on the work. This system is wrong in theory and bad in practice. The sum of money that a work costs is not necessarily a good criterion of the engineering difficulties on labor connected with it, and the constant tendency of the system is towards extravagance and dishonest expenditures on the work by the engineer. The incongruities of the system are strikingly illustrated by bids made for engineering works. For instance in a suburb of Montreal where sewers were to be built the bids of engineers for plans and superintendence varied from one eighth of one per cent to five per cent; in another case from two and five eighths per cent to five per cent. What respect can employers have for a set of professional men when one asks forty times as much as another for doing the same work. The natural inference is that either a fool or a boodler is at one end of the list or else an extortioner at the other. The system of competitive bidding is a much more complex subject than appears at first sight. The old saw that competition is the life of trade is true up to a certain point and remains true so long as competition is in a normal and healthy state and is dealing with a class of business to which it is applicable, but it is liable even in its legitimate sphere to arrive at a stage when the goose that lays the golden egg is killed. Competitive bidding or the asking of prices from different dealers for articles of commerce is a proper procedure when the buyer is capable of judging of the quality of the article he is to receive, can describe the article definitely and insist on the conditions of the bargain being carried out. He cannot treat professional advice in this way. In fact the very reason he asks it is because he is not capable of doing so. He must finally depend on his professional adviser and thus does not know whether he has accepted the lowest or the highest tenderer. Even in commercial articles undue competition finally results in the defeat of the object sought. A striking instance of this was given in an engineering journal sometime ago. The competition of bridge companies had reduced prices below a paying basis and resulted in bridge agents agreeing to divide the business, fix a high price, put in dummy tenders at a high figure, allow the one arranged for, to get the contract, and divide the profits, which the happy buyer was paying in the belief that he was getting the article at a low price through competition.

Competition bids are no guarantee of good service nor cheapness to the employer of professional advisers and the practice does not tend to increase the efficiency of engineers. Even an honest low bid does not always secure employment. In many cases the asking of tenders is a mere pretence, resorted to by councils to gain information without giving remuneration, or to make a show of solicitude for the interests of the tax payers, when the awarding of

the contract is really a foregone conclusion and there have been at least two cases within a short time near Montreal where the lowest and more reliable tenderer has been put aside. But wherein lies the remedy? In an organization among engineers whereby they can control and direct their own members, not for selfish ends only but for the general good, by adopting and enforcing modes of procedure that will produce better qualified engineers, and circumscribe the operations of the unscrupulous manipulator who in engineering, corresponds to the unprincipled quack in medicine.

There seems now to be a possibility of this result being achieved. Ten years ago it seemed doubtful that a society of engineers could be formed and kept together in Canada. When the Canadian Society of Civil Engineers was formed nine years ago, grave doubts existed as to its practicability. In fact some of the older and more influential engineers for a time refused to join in the movement, not wishing to be identified with an undertaking that would be a failure. The success of the venture soon put the permanence of the society beyond a doubt and doubting Thomases were glad to enroll themselves as members. At that time the mention of a close corporation among engineers would have almost stricken some of the older members with paralysis. To-day the society is incorporated as a close corporation in one of the provinces of the dominion.

As the member of a graduates society a few words of reference to our alma mater may be expected and can scarcely be out of place. The triumphs of the engineering school of McGill in regard to its equipment and facilities, and the rapidity with which these triumphs have been achieved, have been referred to so often, not only by Montrealers, but by visitors from many lands, whose knowledge of universities in both Europe and America, qualifies them to speak with authority, that further reference to them seems almost superfluous, but the annual meeting of a society of McGill Science Graduates should not close, especially if held in this building, without allowing these walls to hear and reflect to our ears the name of McDonald. Should any graduate of a university become possessed of a magnificent fortune it would seem but natural that he should delight to bestow a gift on the college halls to which his memory must oft return with the most pleasant recollections, but when without any of these endearing reflections, such princely benefactions are made, as have come to this institution from the gentleman whose name I have just mentioned, they speak volumes for his liberality of mind and kindness of heart. In the success attending this faculty of the university we must not forget the tremendous energy of its dean and the efficiency of its several professors and a feature that is especially pleasing to us is that many of these professors are graduates of the faculty itself.

And now just a word on the reverse side of the picture. I say it personally and not officially as representing the graduates. I regret that the fees of the engineering course have been raised, not because value is not given for them, indeed no college fees com-

policy of the engineering profession which confers the greatest good on the general public, will bring the greatest rewards to the individual engineer. But events troop on apace. To-day we may be able to control and guide these events, to-morrow we may be the subjects of lost opportunities, the victims of overpowering circumstances.

List of Members of Applied Science Graduates Society of McGill University.

| Name. | Address. | Graduated. | Admission to Society |
|--------------------------|---|------------|----------------------|
| Adams (Professor F. D.), | McGill College Montreal. | 1878. | Jan. 1, '96. |
| Adams (W. C.), | Pearce Mines, Wilcox Arizona, U. S. | 1894. | Mar. 4, '96. |
| Augus (W. F.), | 240 Drummond st, Montreal. | 1895. | Sept 28, '95. |
| Asquith (W. R.), | 24 Alexander st, Ottawa. | 1895. | Feb. 13, '96. |
| Baker (H. C.), | Parkins Mills, Ottawa Co., Quebec. | 1895. | July 6, '95. |
| Ball (J. P.), | Chicago Drainage Canal, Lemont, Ill., U. S. | 1887. | July 7, '95. |
| Barnes (H. T.), | 14 Lorne ave., Montreal. | 1893. | Aug. 27, '95. |
| Bayfield (H. A.), | Charlottetown, P. E. I. | 1896. | Apr. 22, '96. |
| Bell Robt. M. D., | Asst. Diector Geological, Survey, Ot. | 1861. | Nov. 27, '95. |
| Biekerdike R., | Box 94, Montreal. | 1891. | Oct. 10, '95. |
| Boswell St., | G. J., Harbor Engineer, Quebec, Quebec. | 1874. | Nov. 12, '95. |
| Bovey Prof. H. T., | Dean of Applied Science, McGill College. | | Honorary. |
| Bulman W. J., | Charlottetown, P. E. I. | 1891. | Apr. 7, '96. |
| Burns J. A., | Mundeloh & Co., Montreal. | 1893. | Nov. 11, '95. |
| Carlyle W. A., | Victoria, B. C. | 1887. | Nov. 8, '95. |
| Carter W. F., | McGill Observatory, Montreal. | 1895. | Nov. 29, '95. |
| Chipman W., | 103 Bay St., Toronto. | 1876. | July 10, '95. |
| Childs A. E., | Exchange Building, Boston, Mass. | 1888. | Aug. 22, '95. |
| Cole A. A., | 28 Victoria St., Montreal. | 1894. | Nov. 20, '95. |
| Costigan J. S., | Danville, P. Q. | 1894. | Apr. 22, '96. |
| Currie Wm., | 89 Union ave., Montreal. | 1895. | Jan. 3, '96. |
| Dawson G. H., | Vancouver, B. C. | 1886. | Mar. 6, '96. |
| Darling E., | Queen st., Montreal. | 1894. | Oct. 4, '95. |
| Denis Theo., | 691 St. Andre st., Montreal. | 1896. | Apr. 22, '96. |
| Dobson G., | Kingston, N. B. | 1895. | Mar. 6, '96. |
| Dougall Wilfred, | 21 Lorne Crescent, Montreal. | 1895. | Dec. 26, '95. |
| Dowling D. B., | Geological Survey, Ottawa. | 1883. | Apr. 20, '96. |
| Duff W. A., | McGill College, Montreal. | 1894. | Feb. 27, '96. |
| Edwards G. M., | 14 Lorne ave., Montreal. | 1889. | June 6, '95. |
| Evans N. N., | McGill College, Montreal. | 1886. | Nov. 12, '95. |
| Evans P. N., | Prudue University, Lafayette, Ind., U. S. | 1890. | Nov. 14, '95. |
| Featherstone J. H., | Vancouver, B. C. | 1893. | Sept. 24, '95. |
| Frost G. H., | Tribune Building, New York City. | 1860. | July 31, '95. |
| Gill J. A. L., | Charlottetown, P. E. I. | 1896. | Apr. 22, '96. |
| Greenburg L., | 833 St Denis st., Montreal. | 1893. | Feb. 18, '96. |
| Greig A. R., | Canada Atlantic Railway, Ottawa. | 1895. | Sept. 7, '95. |
| Guillim J. C., | Three Forks, B. C. | 1895. | Aug. 21, '95. |
| Gunn R. A., | 121 West 21st st, New York. | 1894. | July 13, '95. |
| Hare G. G., | 119 King st, East, St Johns, N. B. | 1896. | Apr. 22, '96. |
| Hamilton W. J., | Pueblo, Colorado, U. S. | 1888. | July 12, '95. |
| Hamilton E. H., | " " " " | 1884. | " " |
| Hart O. C., | Cowansville, P. Q. | 1895. | Sept. 20, '95. |
| Herdts Henri, | 441 St Denis st, Montreal. | 1893. | Apr. 22, '96. |
| Herdts Louis, | McGill College, Montreal. | 1893. | Nov. 5, '95. |
| Hersey M. L., | C. P. R., Delormier ave, Montreal. | 1889. | June 6, '95. |
| Hill Arthur E., | New Westminster, B. C. | 1875. | July 18, '95. |
| Howard W. H., | Pueblo Colorado, U. S. | 1883. | July 12, '95. |
| Huestis H. E., | Halifax, N. S. | 1896. | Apr. 22, '96. |
| Jones T. H., | Brantford, Ontario. | 1877. | Dec. 5, '95. |

