

paper on the "Pressure of Grain in Bins," which he complained contained personal references.

Mr. Jamieson said he mentioned no names in his paper, and did not mean to be personal, but desired to give facts as they were, and to present the results of his investigation into grain elevator construction.

After further discussion, a committee, consisting of the retiring president, the incoming president, and the vice-president, (Messrs. Blackwell, Anderson and Marceau), were appointed a committee to investigate and report, the report to be sent to every corporate member.

On motion of L. Skaife, seconded by C. de B. Leprohon, it was decided to ask the incoming council to formulate a rule by which one of the vice-presidents should be put in the place of seniority for the position of president.

The afternoon was taken up chiefly with the reading and discussion of Dr. Stansfield's paper on Electricity in the Metallurgy of Iron. The lecture, which was illustrated by lantern slides, showing on the screen the actual effects produced in the smelting of metals in an electric furnace in use in the room, was very instructive. It will be referred to in another issue.

The evening was taken up with a lecture by M. J. Butler on the new shops of the Locomotive and Machine Works, Longue Pointe, and one by Henry Goldmark on the new shops of the Canadian Pacific Railway in East Montreal, both lectures being well illustrated.

WEDNESDAY, 27TH JANUARY.

The day was spent in visiting the works above mentioned. The Montreal Street Railway kindly provided special cars for the trip, and Mr. Macdonald, the superintendent, accompanied the party. A generous lunch was provided by the Locomotive and Machine Co., M. J. Butler, the chief engineer, acting as host at the table and as guide through the works. Henry Goldmark performed the same service in the same agreeable manner at the C.P.R. shops.

THURSDAY, 28TH JANUARY.

The first business of the day was the amendment to by-laws, which had been submitted to ballot in November, and which were carried as follows:

To amend by-law 19 by adding "Student members who are also active members of an Engineering or Scientific Society in any University or Engineering school in Canada may, with the approval of the Council, have one dollar of the above fee remitted to them.

(New By-Law.)

21a. On the first of July of each year, interest amounting to two and one-half per cent. shall be added on each succeeding first of January and first of July until the said fees be paid. This interest shall be collectible in the same manner as the annual fees.

To amend By-law 27, by changing the last sentence to read: "Of the fifteen councillors elected, at least eight shall be representative of the four sectional departments of engineering, not less than two for one section, having been nominated as such. Of these representatives of sections, at least one for each section must be resident at headquarters."

(New General Heading.)

28a. There shall be four sections of engineering in the Society, viz.: Electrical, Mechanical, Mining and General. At its first meeting after the annual meeting, the Council shall name for each section a president and a vice-president, both of whom shall be members of Council, and at least one resident at headquarters, to hold office for one year from the first day of June next following. Each section may at its first meeting appoint a member, associate member, or student to act as recording secretary at all meetings of the section during the year. The several sections are empowered to extend the privileges of their meetings under such conditions as they may prescribe to engineers not members of the Society, or other persons interested in engineering. The papers read and discussed by each section shall be published in the Society's transactions, if approved by the committee on papers.

To amend By-Law 29 by adding: "The sectional meetings shall be presided over by the president or vice-presi-

dent of the section, or, in their absence, by a member of the Society."

To amend By-law 35, second paragraph, to read: "This list shall contain at least 34 names of members, viz.: One for president, five for vice-presidents, one for treasurer, one for secretary, one for librarian, and twenty-five for councillors, and of the twenty-five nominated as councillors at least eight shall be representative of the four sectional departments, not less than two for each, and at least eight of the twenty-five must be resident at headquarters. Amongst the eight resident at headquarters must be included at least four representatives of sections, at least one for each section, nominated as such. The list shall be signed by a majority of the Nominating Committee."

To amend 44 (C) by changing the words preceding "during the months of October," to read as follows: "Ordinary meetings of the Society, or of one of the sections thereof, shall be held at eight in the evening of every Thursday.

The ballot for the nominating committee resulted as follows:

For Ontario—Cecil B. Smith, Richard B. Rogers, and Professor John Galbraith.

For Quebec—W. McLea Walbank and G. L. Papineau.

For the Maritime Provinces—F. W. W. Doane.

For N.W.T. and British Columbia—George A. Keefer.

For Newfoundland and Foreign—H. Irwin.

The following were elected

OFFICERS FOR 1904:

President, Col. W. P. Anderson; vice-presidents, Ernest A. Marceau, C. E. W. Dodwell, and C. H. Keefer; secretary, Prof. C. H. McLeod; treasurer, H. Irwin; librarian, E. G. M. Cape; council, G. H. Duggan, John Kennedy, W. McLea Walbank, M. J. Butler, H. J. Cambie, Phelps Johnson, P. W. St. George, D. McPherson, W. R. Butler, R. B. Rogers, Cecil B. Smith, W. B. Mackenzie, Prof. R. B. Owens, E. H. McHenry, St. George Boswell.

Mr. Blackwell then delivered his presidential address, in substance, as follows:

PRESIDENT'S ADDRESS.

This is an age in which everything is measured by results. Some results are measured in dollars and cents, others in "kilowatt hours," and others in "foot pounds" and "ton miles," etc. It is probable that a large number of our members are interested in the question of "ton miles." The economies that have been brought about in transportation on this continent are so much in advance of what has been done in England, and Europe generally, that I have confined my remarks to the ton mileage results of this continent, and in the American Atlantic trade.

In speaking on this subject, Mr. James J. Hill, of St. Paul, who is president of the largest system of railways in the world, when addressing the members of the Commercial Club of St. Paul, remarked as follows: "Regarding land transportation in Great Britain, it costs \$2.35 on an average to haul a ton of freight 100 miles; on the continent of Europe it costs \$1.90, and in the United States 70 cents. We pay four times the wages they pay, and yet we furnish the transportation for little more than one-third of the average of Europe, and still we are hardly happy."

The engineer, who is interested in works that have brought about such gratifying results commercially, is now invited to look at the following table of freight rates reduced to a ton mileage basis:

ALL RAIL RATES.

	Rate.	Miles.	Per Ton per Mile, Cents.
Chicago to Portland, grain, per 100 lbs. ..	16c.	1138	.31
Chicago to New York, grain, per 100 lbs. 16c.		971	.37
Brandon to St. John, N.B., grain, per 100 lbs.	35c.	2038	.37
Springhill, N.S. to Montreal, coal per ton	1.80	738	.25

LAKE AND RAIL RATES.

Chicago to Montreal, grain, per 100 lbs. 13c.	1080	.26
Brandon to St. John, N.B., grain, per 100 lbs.	25c.	2038 .22