The Canadian Engineer

WEEKLY

ESTABLISHED 1893

VOL. 15.

TORONTO, CANADA, DECEMBER 25th, 1908.

No. 52

The Canadian Engineer

ESTABLISHED 1893

Issued Weekly in the interests of the

CIVIL, MECHANICAL STRUCTURAL, ELECTRICAL, MARINE AND MINING ENGINEER, THE SURVEYOR, THE MANUFACTURER AND THE CONTRACTOR.

Editor-E. A. JAMES, B.A. Sc.

Business Manager-James J. Salmond.

Present Terms of Subscription, payable in advance:

 Canada and Great Britain:
 United States and other Countries:

 One Year
 \$2.00

 Six Months
 1.25

 Three Months
 0.75

United States and other Countries:

One Year

- \$2.50

Six Months
- 1.50

Three Months
- 1.60

1.60

One Year

- \$2.50

One Year

-

ADVERTISEMENT RATES ON APPLICATION.

HEAD OFFICE: 62 Church Street, and Court Street, Toronto TELEPHONE MAIN 7404.

Montreal Office: B 32 Board of Trade Building. T. C. Allum, Editorial Representative. Phone M 2797.

Winnipeg Office: Room 315, Nanton Building. Phone 8142. G. W Goodall, Business and Editorial Representative

Address all communications to the Company and not to individuals.

Everything affecting the editorial department should be directed to the Editor.

NOTICE TO ADVERTISERS:

Changes of advertisement copy should reach the Head Office by 10 a.m Monday preceding the date of publication, except the first issue of the month for which changes of copy should be received at least two weeks prior to publication date

Printed at the office of The Monetary Times Printing Co., Limited, Toronto, Canada.

TORONTO, CANADA, DECEMBER 25, 1908.

CONTENTS OF THIS ISSUE.

Editorial:	Page.
Engineers' Club	907
American Bridge Design	907
Toronto Sewage Disposal Question	908
Leading Articles:	
Grounded Transmission Mediums.—III	909
Engine Tests	910
Kinnickinnic Pumping Station	912
American Bridge Failure	913
Railway Orders	915
Society Notes	915
Construction News	917
Market Conditions	919

INDEX FOR 1908.

Special care has been taken with the index of the Canadian Engineer for 1908. It has been cross-indexed, and many of the articles are classed under four heads. This index should make a valuable addition to bound to expect that it would represent the best design and the most ingenious methods. The failure of this exceptionally large structure forced home the conviction that too much had been taken for granted, that some of our

volumes of the Engineer for 1908. It will be ready about January 6th 1909, and will only be sent to those applying for a copy.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

On January 28th, 29th and 30th the Canadian Society of Civil Engineers will meet in Toronto. Mr. Henry Holgate says:—

"The Society is national in its character, and must set itself as a body against any local feeling or prejudice which may exist.

"Attending the meeting in Toronto will promote harmony; without a good understanding amongst its members the Society will not be as forceful as it

"Harmony, co-operation success."
Mr. J. G. G. Kerry's reply next week.

ENGINEERS' CLUB, TORONTO.

The Engineers' Club, Toronto, are to be congratulated on the success of their annual gathering, and upon the large part this club has played in the life of the engineers resident in Toronto during 1908. It is not an easy matter for an executive to arrange all the meetings so that they will appeal to all the members, but they have shown excellent judgment in securing speakers who were specialists in their own field and could speak authoritatively. The variety in subjects treated was large, yet in every discussion the good of the engineering profession was always kept in mind. The political and sociological side of public questions was left to other organizations.

It is true that more than once the addresses given caused some mild excitement outside of the engineering profession, but this was not because the members of the Club attempted to interfere in foreign affairs, but because they discussed earnestly and freely the engineering side of the problems that affect the community. That is its field, and an organization which covers well and carefully its own field will soon come to its own.

That the Engineers' Club is coming to its own is manifest. From a membership of twenty in 1890 it has grown, until to-day its list includes some three hundred engineers. Of these, over seventy were added during 1908. Toronto is becoming a greater centre for engineers—this club must meet new demands. It is not well to be too visionary, but more faith in the future of this club would bring greater results.

AMERICAN BRIDGE DESIGN.

The failure of the Quebec Bridge has done a great deal to awaken a serious study of the methods of American bridge design and American bridge erection. Designed by a leading engineer and undertaken by one of the best bridge construction companies, we had a right to expect that it would represent the best design and the most ingenious methods. The failure of this exceptionally large structure forced home the conviction that too much had been taken for granted, that some of our