

The Canadian Engineer

Established 1893

A Weekly Paper for Canadian Civil Engineers and Contractors

Terms of Subscription, postpaid to any address :			
One Year	Six Months	Three Months	Single Copies
\$3.00	\$1.75	\$1.00	10c.

Published every Thursday by

The Monetary Times Printing Co. of Canada, Limited

JAMES J. SALMOND
President and General Manager

ALBERT E. JENNINGS
Assistant General Manager

HEAD OFFICE: 62 CHURCH STREET, TORONTO, ONT.

Telephone, Main 7404. Cable Address, "Engineer, Toronto."

Western Canada Office: 1208 McArthur Bldg., Winnipeg. G. W. GOODALL, Mgr.

Principal Contents of this Issue

PAGE

Engineering Prestige, by R. O. Wynne-Roberts	331
Methods and Cost of Snow Removal, by H. F. Richards	333
Laying Curves by Tangent Offset	334
Some Practical Points in Design and Construction of Partitions, by H. L. Barraclough	335
Kettle Rapids Bridge, by W. Chase Thomson	337
Asbestos Output Increased	341
Concrete in Western Canada, by J. F. Greene	342
Personals	352
Construction News	48
Where-to-Buy, An Engineering Trades Directory	60

DOUBLE-TRACK THE INTERCOLONIAL!

FROM Moncton to Halifax the Intercolonial Railway should be double-tracked as a war measure and as a measure of lasting importance to the prosperity of Canada. Halifax is a world port with wonderful possibilities, but it is being strangled by inadequate railway approach facilities. The Intercolonial, the Canadian Pacific (via St. John) and the National Transcontinental all pour Halifax freight into Moncton. From Moncton this freight must be hauled for 186 miles into Halifax over a single-track railway. The port of Halifax is now a big bottle with a very small neck.

On this continent the nearest port to England and France is Halifax. This is a factor of prime importance when bottoms are at such a premium and when the fight for world civilization may depend upon the ability of American and British shipping to survive the staying power of the Hun. The average freighter can save upwards of eight days in a return trip across the Atlantic if she sails from Halifax instead of from Portland, Boston or New York; and upwards of four days if instead of from St. John. That means that a boat on the Halifax route can carry from one-quarter to one-third more men, food, ammunition and supplies than can a boat of similar size which loads at American ports.

Railway transportation and port facilities govern the degree to which this geographical advantage can be utilized. The magnificent harbor at Halifax is rivaled by few in the shipping world. As the government's terminal plans mature at Halifax, that port will no doubt be equipped with facilities of first class, but railway congestion will still drive traffic into other channels unless the Intercolonial from Moncton to Halifax be double-tracked.

Operating officials state that a single-track railway can operate little more than 400 freight cars per day in each direction from any terminal, allowing for efficient passenger operation at the same time. About that many cars go into and leave Halifax daily, and probably more than that number are handled at St. John, but thousands of

cars from the Canadian West and Western United States, now routed to American ports, would go to Halifax if the Canadian Government Railways could handle them.

The railways to the American ports are heavily congested. The whole shipping problem on the Atlantic coast would be materially relieved by widening the neck of the Halifax bottle. The Canadian Government Railways could no doubt handle from three to four times the present volume of traffic at Halifax were the line double-tracked from Moncton. Such an outlet for another eight or twelve hundred cars daily would not only relieve traffic congestion, but also, for the reasons outlined above, would be equivalent to a substantial increase in the number of freighters and transports under the Allied flags. The cost of this double-tracking would probably not exceed \$12,000,000. It should be voted from the funds of the last Victory Loan, without hesitation and without delay, at the present session of Parliament.

GOVERNMENT OFFICE BUILDING

TENDERS are now being called by the Public Works Department for the construction in Ottawa of a nine-story office building which is being opposed by some Ottawa engineers and architects upon the ground that it does not conform with the excellent plan completed two years ago by the Federal Plan Commission, and that it will only anchor permanently what is now but the temporary inconvenience of the scattered location of war-time department overflows.

The government has been urged to adhere to the principles of the Federal District plan, and to construct this \$1,500,000 building on government property in such location as to conform with the plan. There being no accepted or determined architectural design for the large group or main scheme of department buildings, it has been suggested that for the present only the steel and concrete be erected and fitted with factory sash, the outer shell of decorative stone to be added later when more funds are available and when the whole group of buildings has been finally designed. It has been said that this would permit at a minimum cost of a thoroughly hygienic and economical building, with all heating, ventilating and other equipment permanently in place.

In reply to an enquiry from *The Canadian Engineer* whether the government had given consideration to the Federal District plan in designing this building, Hon. Frank B. Carvell, Minister of Public Works, writes:—

"We have considered the Federal District plan for Ottawa very carefully, and the construction of the proposed office building in no way interferes with the suggestions therein provided for. The plan, so far as the government was concerned, practically made a suggestion as to what should be done on the north side of Wellington Street. The government of Canada is to-day paying \$650,000 annually to the landlords of Ottawa, some of these rentals being on a fair basis and others amounting to little short of extortion. The war has brought an enormous influx of new officials to the service, and the Public Works Department is practically at its wits' end to find accommodation for them. Were we to commence the construction of a building on the general plan and along any plan which would be commensurate with buildings of that nature from an architectural standpoint, it would take two and a half to three years to get any unit ready for occupation, at a cost of 100 per cent. above normal and probably with an office capacity of not more