

# The Canadian Engineer

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President and General Manager  
JAMES J. SALMOND

Assistant General Manager  
ALBERT E. JENNINGS

HEAD OFFICE: 62 CHURCH STREET, TORONTO, ONT.  
Telephone, Main 7404. Cable Address, "Engineer, Toronto."

Western Canada Office: 1206 McArthur Bldg., Winnipeg. G. W. Goodall, Mgr.

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## CHICAGO DRAINAGE CANAL DIVERSION

**A** GAIN comes the plea, often repeated, for permission to increase the diversion of water for the Chicago Drainage Canal. This time Francis C. Shenehon, Dean of the College of Engineering, University of Minnesota, who was at one time District Engineer of the U.S. Great Lakes Survey, is its special advocate. He proposes that the effects of the diversion be compensated for by remedial works on the Great Lakes, these works to be financed by the Chicago Drainage Canal Commission.

The history of the canal is too well known to warrant repetition. It suffices to say that to-day the commissioners in charge of the drainage district, in defiance of all governmental authority, are diverting approximately 10,000 cubic feet per second, while the permit issued by the U.S. Secretary of War, in whom is vested jurisdiction over, and discretion of the navigable waters of the United States, gives them the right to divert not more than 4,167 cubic feet per second.

Canada has protested many times against this extraordinary state of affairs, but to no avail. As a matter of fact, the Canadian authorities were not even consulted when the original permit was granted. Many are the arguments against increased diversion and in favor of limiting the canal to the original permit of 4,167 cubic feet per second. Despite Canadian protests, the United States government has taken no adequate steps to enforce its orders and to prevent this wanton breach of constituted authority.

Mr. Shenehon now presents this scheme of remedial works which, if accepted, would allow the drainage commissioners to perpetuate their illegal diversion, and which would afford an easy method for the United States government to step out of its difficult position of being unable, even with

the authority and prestige of its Supreme Court, to enforce its rightful prerogatives.

But this proposition is not acceptable to Canada; although remedial works on the lakes may partially compensate for the injuries to navigation, they cannot compensate for the power that will be lost to both countries as a result of the diversion. It is generally conceded by those who have been in intimate touch with the original scheme, that the development and sale of the power now obtained on the Drainage Canal under a 40-ft. head, is the great incentive to the diversion of additional water. The sale of this power is in the hands of the commissioners, and it finds a ready market in the drainage district.

This water, if carried along in its proper course through the Niagara and St. Lawrence rivers, could be used at the several points of development under a total head of fully 500 ft., which means approximately 500,000 h.p. Canada's share of this 500,000 h.p. will be permanently lost if the Chicago diversion is legalized by the acceptance of "compensation" for damages to navigation.

## BRITISH OPTICAL FIRMS BUSY

**O** NE result of the war in England has been an enormous development of the optical manufacturing firms, states A. J. Ames, managing director of E. R. Watts & Son Canada Limited, who recently returned to this country after a four months' visit to his firm's English factory.

"As an instance of this development," says Mr. Ames, "I might mention that within a fortnight of my sailing for Canada, our London house had received orders for the following important geodetic instruments:—

"Twenty 12-in. micrometer transit theodolites reading to one second; fifteen 8-in. micrometer transit theodolites reading to two seconds; and one hundred and fifteen 6-in. micrometer transit theodolites reading to ten seconds.

"This does not take into consideration large orders for ordinary surveying and scientific instruments, nor does it reckon with the very large number of instruments connected with the various war departments in Britain, contracts for which are still being concluded.

"In pre-war time one seldom heard of an order for 12-in. micrometer theodolites for more than two at a time, and very often only one of these most important and precise instruments was ordered."

With labor conditions as they are in England, one wonders where all the business is coming from to keep the large optical firms so busy. However, everyone who has visited Great Britain since the war agrees that a wonderful change has taken place in the "old country," and that hereafter they are going to be more "up and doing" than ever. When British competition strikes its stride, Canadian and United States firms may have to hustle for their fair share of Canada's business.

## NOVA SCOTIA POWER COMMISSION

**U** NDER the Power Commission Act passed at the last session of the Nova Scotia Legislature, a power commission for that province was recently appointed and is undertaking definite investigations with a view to an early development of certain water powers adjacent to the city of Halifax. The members of the commission are Hon. E. H. Armstrong, commissioner of Public Works and Mines (chairman), R. H. MacKay, of New Glasgow, and F. C. Whitman, of Annapolis. K. H. Smith, hydraulic engineer of the Dominion Water Power Branch, who for some time past has been in charge of hydrometric work and water power investigations in the maritime provinces and at the same time has acted as engineer to the Nova Scotia and New Brunswick authorities concerning water power matters, has been appointed chief engineer and acting secretary of the commission. It is expected that Mr. Smith will be able to continue in his present capacity with the Water Power Branch.