The Canadian Engineer

WEEKLY

ESTABLISHED 1893

VOL. 15.

TORONTO, MONTREAL, WINNIPEG, VANCOUVER, JANUARY 10th, 1908. No. 2



ESTABLISHED 1893

Issued Weekly in the interests of the

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

Subscription : Canada and Great Britain, \$2.00 per year ; United States, \$2.50 Foreign, 10s., payable in advance.

Advertising 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, Business and Editorial Representative. Phone M 2797.

Winnipeg Office: 330 Smith Street. Amalgamated Press of Canada, Limited Phone 5758.

Vancouver Office: Representative: A. Oswald Barratt. 619 Hastings Street. British Representative : A. Webster, 84 Chancery Lane, London, E.C. 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 alvertisement 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.

1907 INDEX READY.

Index for Volume 14 (1907) of the Canadian Engineer is now ready. Subscribers desiring copies will kindly drop us a postal to that effect.

CONTENTS OF THIS ISSUE. Editorial .

	r age.
Aim of a College Course	. 37
Ontario Power	27
Georgian Bay Concl	. 57
Leading Anti-	• 37
-caung Articles:	
Foundation Work for Six Lift Bridges	. 38
Cores and Core Sand	10
Correspondence :	. 40
* Forestry in Ontario	20
Concrete Specifications	. 39
Running T T	• 39
Running a Lot Line	. 39
Concrete Heater	. 30
Construction News	. 59
Market Canditian	. 41
and the Conditions	. 44

THE AIM OF A COLLECE COURSE.

From the various Provinces there will return to the universities a great body of students. A large per cent. of these men will be registered in the Faculties of Applied Science, expecting there to find a key that will open doors to wealth, opulence and ease.

The industrial expansion of this decade required technically trained men. The Science departments of the universities attempted or were forced to attempt to supply the demand. Men came up to the university to learn how to make a living. The success of some of the graduates appeared to emphasize this view, until it is hard to convince

the undergraduate that the aim of a university should be to teach not how to make a living but how to live.

To assist in reaching this ideal some have suggested that the Applied Science Departments pay more attention to English and French ethics and economics. These are studies of great importance and undoubted culture value. You may arrange courses without number; you may add new subjects and discard the old, but unless the problems are approached in the right spirit, unless the atmosphere of the classroom is that of honor and justice; unless the lecturer is true to right ideas and altogether just, the true aim of a university course will be lost.

The sooner the student learns that it is not what he studies, but how he studies; that the training he receives is of more value than the information stored, the sooner he learns the value of a college course.

POWER IS ON.

In many Ontario municipalities the selection of council boards was of secondary importance. The power by-law was the all-important topic of municipal politics. Cheap power was the cry, and the voting left no doubt as to what the people wanted.

Each district had its own peculiar conditions; existing plants, distance of transmission, uncertainty as to the demand there would be for electric energy. Some municipalities face all these difficulties and more, but the people have demanded power, and they must have it.

The various municipalities have expressed confidence their ability of distribute. The Hydro-Electric Commission will find means of generating and transmitting. The question is now a business one. No doubt it involves many difficulties. Some experiments must be carried out, that large expenditures may not be wasted. Existing plants must be used as far as possible, that wasteful competition shall not result. Intelligence and public spirit must be brought to bear on the working out of this tremendous question. The days of excitement and hysterics are past. Cool, aggressive, and statesmanlike methods must now be adopted to secure, unhampered, for the people of the Province the great gift of Nature-many waterfalls.

THE GEORGIAN BAY CANAL.

The next great construction work in Canada will probably be the Georgian Bay Ship Canal. For many years the problem of cheaper transportation from. Western Canada to the ocean has been a topic of discussion. The railways have failed to furnish it. The growth of trade between Western and Eastern Canada has been much greater than the improvement in railway transportation. The hope of the situation has been lake shipping; but this, too, has become congested. The accommodation at lake ports is inadequate; the transhipping is expensive. To secure more rapid transportation and reduce transportation charges, the Georgian Bay Canal is suggested.

The canal is to be 425 miles long, and will follow the French River from the Georgian Bay to Lake Nipissing. From Lake Nipissing, by Trout River to Trout Lake and Talon Lake, and from here will drop by way of the Mattawa River to the Ottawa and St. Lawrence.

The natural advantages of this route are notable. Canal navigation is usually slow, the wash from the vessels making impossible a speed greater than five or six miles per hour, or even less, but in the proposed route great