

abridgment in departments already established. If industrial development is the question of the hour, it should be recognized in institutions now sufficiently equipped with qualified instructors and apparatus for the many phases of industrial training harbored within.

The universities and colleges have been making severe raids upon their money-bags to provide technical courses to meet the demands from an increasing number of students and the spread of industry over the Dominion. While these quantities increased, the former became lighter, and the growing inequality has not been adequately recognized by the Government. For instance, the University of Toronto authorities are fully aware of the crying need of a course in Ceramics. Emphasis from the Canadian Clay Products Manufacturers' Association at the time of their recent convention was unnecessary from the viewpoint of apprising the University of conditions in the clay-working industry. Their urgent demands, however, together with others, disclosed the fact that the great institution of learning of the Province of Ontario lacked funds to establish, even on a small scale, a course of instruction to serve their needs, although there was sufficient space available in its laboratories to house such a department.

The rapid growth and development of the country and the further application of science and scientific methods to all forms of production, construction, conservation, and administration, will continue to call for still larger number of graduates. In consequence the universities and colleges are sure to experience further necessity of increased financial support. It is gratifying that the Commission is of the opinion that this should be provided from a source that will not necessitate the fees required from students to be so high as to exclude suitable young persons who may seek the highest grade of technical instruction.

### MONTREAL'S TUNNEL PROPOSAL.

A gross revenue of \$3,000,000 and a net revenue of \$1,500,000 for the first year, with the promise of 12 per cent. profit at the expiration of ten years, all derived from an initial outlay of twenty millions, is the subject of a report received by the Montreal Board of Control from Mr. F. S. Williamson, consulting engineer. The expenditure would provide for an underground tram service, with twelve and one-half miles of two-track lines. He estimates a four-line tube to cost \$30,000,000, or \$530 a foot, to which must be added the cost of stations.

Mr. Williamson is of the opinion that the trolley car in Montreal is doomed to disappear, and that before many years surface car traffic on business streets will be subjected to prohibitive measures, giving place to motor buses and tunnel systems.

The report is interesting in that the congestion of traffic on the central thoroughfares of both Toronto and Montreal are demanding material relief of some kind. The problem of surface transportation is certainly not new in either city, and, although the optimism of Mr. Williamson is to a degree corroborated by the adoption of motor buses and tubes in many cities in Europe and the United States, still we are rather inclined to believe that the disappearance from our busy streets of surface cars, with their motive power necessities, is not an affair of the next few decades.

It is stated that the chief engineer has been asked to report to the Montreal controllers on the report.

### EDITORIAL COMMENT.

What is claimed to be a record in ground tunnelling is reported in connection with the Canadian Northern Montreal Tunnel and Terminal Company's work in that city. In thirty-one days 810 feet have been completed, the daily progress averaging from 22 to 28 feet per day for the latter part of this period. It will be remembered that the tunnel when finished will exceed three miles in length. Mr. S. P. Brown, managing engineer for Mackenzie, Mann & Co., is chief engineer of the work.

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The Canadian Northern Railway has been successful in its application to the House of Commons for a further subsidy to aid in the completion of its Transcontinental line. The House recently voted aid to the extent of \$15,600,000, all of which, with the exception of \$1,000,000, will be devoted to construction work on the line between Edmonton and Yellowhead Pass, B.C. The balance is for the Toronto to Ottawa line. The Temiskaming and Northern Ontario Railway was also subsidized to the extent of \$2,000,000, and a bill authorizing the loan of \$15,000,000 to the Grand Trunk Pacific Railway was passed.

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In a recent trade and commerce report the Canadian varieties of graphite were claimed to excel the Ceylon product for a few special purposes, and was suitable for many more, providing proper methods were adopted in grading the product. Although no regular trade has been established with the United Kingdom, the statement is encouraging, and if veins of uniform composition can be suitably worked and careful means employed to properly grade the graphite according to quality, Canadian producers will be able to establish a considerable business and satisfactorily compete with the plumbago industry of Ceylon for many purposes. The use of graphite seems to be constantly on the increase, and when the Canadian industry has completely emerged from the many preliminary obstacles which, up to the present, have been a most serious handicap, it is to be anticipated that more definite and systematic efforts will be successful in securing a share of the business open in Great Britain.

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At the annual Convocation of the University of Toronto on June 6th the honorary degree of Doctor of Science (D.Sc.) was conferred upon Mr. T. Kennard Thomson, who is a graduate of the School of Practical Science, '86, and whose prominence as a consulting engineer is widely known, especially in connection with caisson foundation practice and skeleton steel and reinforced concrete construction in New York City. The honorary degree is a new one in the University of Toronto, and the event is of further interest as it marks the first conference of an honorary degree by this University upon one of its graduates from the Faculty of Applied Science and Engineering or from the old School of Practical Science, and, in fact, upon any follower of the profession of engineering. It will be remembered that the University of Toronto has this year instituted an additional academic degree of Master of Applied Science (M.A.Sc.), open to the holder of the degree of B.A.Sc. who spends an additional year in attendance on a special course of study, upon which work he also compiles a thesis before presenting himself for the examination leading to the degree.