

ADVERTISING ENGINEERS.

Products of scientific manufacture require promotion even more than do commercial articles of general consumption. The engineer or manufacturer who has spent years of work and thought upon the perfection of a new product or machine accepts as axiomatic that, because there is a need for it, there will be a demand. He forgets that before his possible customers will give up their accustomed and familiar methods to adopt the new, they must to some degree pass over the same mental course that he has traversed, and, unless educational measures are adopted, this is apt to be a matter of many years. To introduce his improvements in steam engine valve gears, Corliss was forced practically to giving his machines away. The Parsons steam turbine was an engineering success ten or twelve years before it became a commercial success in this country. On the other hand, the turbine centrifugal pump, by modern advertising methods, has been made commercially successful in a period of two years, the sales of the third year being four times those of the first, while a prominent cordage manufacturer has increased the sales of his transmission rope twenty times over within a few years by means of advertising.

Not only, however, do engineering products require an educational publicity campaign for their introduction within reasonable time, but all the methods of general advertising, suitably modified, are in some way applicable in promoting their sale. There is a science of economy of communication and apprehension, as of other things, and some ways of overcoming psychological inertia are less expensive and attended with less friction than others.

Recognizing these facts, some engineering and manufacturing concerns have established advertising departments and have placed them in charge of men of high ability. This plan, however, is more expensive than most businesses justify, and many firms attempt to handle the work through already overburdened executive officers, or else turn it over to clerks.

To meet these conditions, Mr. Halbert P. Gillette, M. Am. Soc. C.E., M. Am. Inst. M.E., formerly Associate Editor of Engineering News, and Mr. Geo. H. Gibson, A. M., Am. Inst. E.E., J. M., Am. Soc. M.E., formerly manager of Publicity for the International Steam Pump Co., Manager of the advertising department of the B. F. Sturtevant Co., and editor of the Westinghouse Companies' Publishing Department, have formed a partnership as "advertising engineers," under the name of the Geo. H. Gibson Co., with offices in the Park Row Bldg., New York City. They undertake to conduct a firm's advertising in the same manner as would a department in the firm's own offices, and are not advertising agents in the usual sense of the term, as they receive no commissions, rendering only service and leaving the actual purchasing of space and printed matter in the client's hands.



RAILWAY DEVELOPMENT IN CANADA.

There were in operation in Canada last year 19,431 miles of railways. In 1867, when the scattered Provinces of Great Britain in North America were confederated, the total railway mileage was 2,087, truly a remarkable development in thirty-eight years for a population which in the same period has increased from less than three millions to over six millions. Canada has 167 railways propelled by steam. Twenty-five of these have been amalgamated, and form the Grand Trunk Railway system. The consolidation of thirty others has produced the Canadian Pacific Railway system. The remaining 112 are more or less consolidated. The actual number of miles laid of the several companies is as follows: Canadian Pacific, 8,062; Grand Trunk, 3,159; Government railways, 1,551; other railways, 6,832; bridges and tunnels, 7; total, 19,610. The aid granted to railways by municipalities and Governments in Canada amounts to \$243,926,230, or nearly £50,000,000.

The Three Transcontinental Lines.

The attention of the country is at present concentrated upon the work of the three great transcontinental lines—the Canadian Pacific, the Canadian Northern, and the Grand Trunk Pacific. The Canadian Pacific, the pioneer transcontinental road in Canada, has many important extensions and improvements under way. Chief of these is the double tracking of its present main line between Winnipeg and Fort William, a distance of 426 miles, at a cost of over £1,200,000. This work is being done to relieve the congested traffic between the wheatfields of Manitoba, Saskatchewan, and Alberta, and the thriving port of Fort William, at the head of navigation on Lake Superior. The new lines under construction total 483 miles. Among them is a branch of 227 miles, extending from Bolton, twenty-seven miles north of Toronto, to Romford, near Sudbury, on the main line. Hitherto the Canadian Pacific, in order to reach its main line at North Bay or Sudbury, with traffic from Western Ontario points, has been dependent upon the Grand Trunk, between Toronto and North Bay, and has had to share its traffic receipts with that company, but when this new branch is built the C.P.R. will have its own line from Toronto north to Romford. Another important extension in Ontario is a line from Guelph to Goderich, on Lake Huron, the total length being eighty miles. In the city of Montreal a six mile branch is being built on the south bank of the Lachine Canal to reach an important manufacturing and industrial centre.

Reduction of Grades in Manitoba.

In Manitoba facilities are to be given to settlers south of Darlingford by a seven mile extension to Kalidea. Another extension on the prairies is known as the Pheasant Hills branch, fifty-five miles in length. Between Calgary and Edmonton two branches are under construction, known as the Lacombe and Wetaskiwin extensions. Fifty miles of construction is being done on each of these lines. The Wetaskiwin extension will eventually be carried east to connect with the Pheasant Hills branch now being built westward. The Lacombe extension will be built eastward for a distance of 150 miles or 200 miles and connected with the Wetaskiwin division. All these new lines are to meet the requirements of the rapid settlement of Western Canada, now in progress. In British Columbia an eight mile branch is being built from Yahk, on the Crow's Nest road, to connect with the railway now being built northeast from Spokane, in the State of Washington. Not the least important of the C.P.R. improvements, which are being carried out under the supervision of the company's chief engineer, Mr. W. F. Tye, is the reduction of grades on the main line, particularly on the Brandon, Broadview, and Swift Current sections. The changes on these sections will reduce the ruling grades from 1 per cent. each way to .4 per cent. each way, more than doubling the hauling capacity of the locomotives. It will thus be seen that the Canadian Pacific, by these improvements and extensions, is keeping pace with the development of the Dominion.—"Times" Engineering Supplement, August 16, 1905.



In some instances the hard-headed novice has better chances of success in advertising, for he has the advantage of being removed from the technical details that often befog the experienced advertiser, and considers methods and mediums solely upon their merits.

—William Henderson, Canadian Commissioner at the Liege Exposition, reports that great interest is taken in the Canadian mineral exhibit, which has attracted many professors of geology and mining experts. A special visit was paid to this collection by the members of the International Congress of Mining Engineers, who appreciated the practical way in which the mineral resources of Canada are presented to the public. There have been many enquiries from firms who wish to purchase Canadian ores direct, more especially with regard to zinc, chrome, nickel, cobalt, asbestos, mica, phosphate, coal and corundum. The Hadfield Steel Foundry Co., of Sheffield, England, using \$2,000 worth of abrasives per month, will make a trial of Canadian corundum.