

Editorial

WAR EXPORTS AND PEACE

The total trade of Canada for the twelve months ended June, exclusive of coin and bullion, was valued at \$1,565,436,000. Of this, imports of merchandise represented \$595,921,000 and the exports \$969,514,000. The difference between the value of our imports and exports of merchandise in that period was therefore \$373,000,000. After making allowance for the payment of \$187,000,000 interest charges to Great Britain and the United States, there is a balance of trade in favor of Canada amounting to \$186,000,000.

Of the exports, totalling \$966,514,000, only \$96,000,000 represented the export of foreign produce, the remaining \$873,413,000 being exports of Canadian produce. These were made up as follows:—

Mine	\$ 71,834,835
Fisheries	23,248,778
Forest	53,259,354
Animal produce	108,147,108
Agricultural produce	323,510,530
Manufactures	284,495,047
Miscellaneous	8,917,802

Comparing these figures with those for the similar period of 1914, it is found that our exports of mineral products have increased during the year 22 per cent.; fisheries exports by 15 per cent.; exports of forest products, 23 per cent.; agricultural products, 75 per cent.; animal produce, 96 per cent.; agricultural produce, 75 per cent.; the exports of manufactures, by 365 per cent.; and miscellaneous classes by 4,426 per cent.

Agricultural products represent the biggest item in our exports and probably will always do so. But the fact that Canadian manufacturers have been able to increase their export trade to a volume nearly five times as great as it was two years ago, gives an idea of the productive power of Canadian factories. The present unusual demand for Canadian manufacturers' goods is due to the war. The problem which confronts them is to measure and encourage, at home and abroad, the demand for their goods after the war. Something substantial has to be found to take the place of war orders. How many manufacturers are allowing to-day's prosperity to shadow to-morrow's problems?

PLACING OF CENTRAL SPAN, QUEBEC BRIDGE.

Announcement has been made that on September 11th traffic on the St. Lawrence River at Quebec will be suspended for twenty-four hours in order to permit the central span of the Quebec Bridge to be swung into position.

This is an event that will attract the attention of engineers all over the world inasmuch as it will mean the linking together of the two ends of a structure the development of which has been watched with great interest since it was commenced a few years ago.

Public interest too in the successful completion of this work has been high because it means the placing into position of the last link in the unbroken rail to rail highway which will then extend from ocean to ocean.

The design, construction and erection of the Quebec Bridge constitutes one of the really great engineering feats of modern times, and will occupy for a long time to come an increasingly important position in the ranks of great national engineering undertakings.

This central span, an excellent picture of which appears in this issue, is 640 ft. long, 110 ft. high at the centre, 88 ft. wide and weighs approximately 5,000 tons lifting weight. The methods to be employed in lifting this span into position were described in detail in our issue of June 1st, 1916.

From time to time *The Canadian Engineer* has kept its readers informed as to the progress made in the construction of the bridge. It is a notable fact that while work was carried on from both sides, when the north shore anchor arm was completed, the main post was only 15 inches out of plumb, this being due to the unbalanced weight of the uncompleted structure. The calculations have been so close that when the centre span is in position, as it will be within a few days, the centre post of each main truss will be practically perpendicular.

To all who have been in any way connected with this notable enterprise, either in its design, construction or erection, *The Canadian Engineer* extends its sincere congratulations.

INTERNAL COMBUSTION ENGINES.

During the past few years there have been installed in Canada quite a number of Diesel and other internal combustion engines, many of them being put in by municipalities for electric lighting plants, pumping plants in connection with sewerage and waterworks. This is perhaps more true of our Western municipalities than it is of the East.

The number of uses to which these engines have been put is increasing, and it is likely that as time goes by municipalities will find these engines suitable for other kinds of work than that for which they are now employed.

In this connection we publish in this issue abstracts of a paper by Mr. F. R. Phipps, read before the Institution of Municipal and County Engineers, in which he makes some very interesting comparisons between steam, oil and gas engines.

In considering the deductions which Mr. Phipps makes in his paper one will have to take into account the local situation. For instance, where coal is cheap, as is the case in some sections of the Dominion, steam power will almost always win out. At the same time, the figures which Mr. Phipps gives will, we feel sure, be of considerable interest to municipal engineers throughout Canada, and we have much pleasure in presenting them.

THE CHANNEL TUNNEL.

For many years a tunnel under the English Channel connecting Great Britain and France has been talked of. Since the war began this much-discussed project has been revived in a serious form and it is generally accepted, in