WHAT CANADA HAS DONE

These compact countries fought great wars with never a steam engine to help them. It was possible for them to collect and distribute men and materials on the common highway. There is not to-day a single connecting road across Canada.

The Canadian railways, when war began, had what seemed a trifling problem on hand: the moving of a mere twenty thousand troops to and from various training camps preparatory to embarkation. A supplementary movement of materials was involved also —but there was no strain upon our railway capacity.

Then, one day, a section foreman discovered scattered along his section of track a number of long steel affairs that looked like car axles. These were

billets—part of the first to arrive in Canada from American mills, and they had spilled from the traps of a hopper-bottom car! The munition trade had commenced!

Since then the volume of railroad traffic in Canada has swelled day by day to enormous proportions. Instead of 20,000 troops to be handled and re-handled Canadian roads have dealt with almost half a million. Instead of a trifling movement of munitions—a colossal one! Instead of normal crops—extra crops due to the "Patriotism and Production" campaign.

And this augmented traffic has had to move faster and more regularly than ever before lest the Admiralty convoys be held up. General superintendents in charge of some of the "key" divisions of the big roads have had to work from 12 to 20 hours a day to keep roadbed, rolling stock and crews up to top-mark.

The quality of fuel, and the supply of labor fell away off. Such seeming commonplaces as ties, gravel and track labor became scarce and expensive. The smooth road-bed essential to speed was with difficulty maintained. Rails that should be renewed had to do extra long service because all steel was requisitioned for munitions.

Then came two extra severe winters and the collapse of the railroad systems in the country to the south. With that collapse 22,000 Canadian cars, over and above the numbers of American cars in Canada, were "lost" on the said foreign lines. With this came fuel shortage and an overflow of American transcontinental traffic to Canada. Eighty thousand "foreign" laborers had to be moved from Vancouver to Halifax!

Yet the Canadian railways have suffered no tie-up of more than local effect—and that on only a few occasions. Not a ship has been kept waiting for cargo. Goods for Europe, for Russia, for Africa, for China, for Australasia have been handled in addition to the very heavy domestic traffic.

Much credit is due perhaps to the Canadian Railway War Board for its work in eliminating wasteful duplication of service, light loading of cars, unnecessary delays in car-movements. But more is due the Canadian railroads, whose experience in operation over long distances has enabled them to work together as no other roads have been able in similar territory to do anywhere in the world.

Canada's railways will emerge from the war in the best possible condition, so far as organization and practice are concerned, to handle any and all traffic which may develop with the advent of peace.

A Billion-Dollar Mark

From Sir Joseph Flavelle, Bart.

Chairman, Imperial Munitions Board

THE value of orders placed by the Imperial Government, through this Board, for the production of munitions, ships, aeroplanes, etc., AMOUNTS TO $1,160,000,000. ACTUAL CASH DISBURSEMENTS HAVE EXCEEDED $950,000,000; 950 MANUFACTURERS RECEIVED CONTRACTS; 400 MANUFACTURERS ARE NOW IN ACTIVE CONTRACT RELATIONS WITH THE BOARD. These contracts extend from St. John's, Nfld., in the East, to Victoria, B.C., in the West, and were placed in every Province of the Dominion with

(Continued from page 8.)

the exception of Prince Edward Island.

Upwards of 56,000,000 shells have been produced; 60,000,000 copper bands; 45,000,000 cartridge cases; 28,000,000 fuses; 70,000,000 lbs. of powder; 50,000,000 lbs. of high explosives; 90 ships built, or under construction, aggregating 375,000 tons; 2,700 aeroplanes have been produced.

The Board constructed and equipped, and now operates seven national plants, upon which they expended a sum exceeding $15,000,000; the cost of more than half of which has been amortized in the operation of the plants.

Sunbeam aeroplane engines, for fighting planes at the front, are being produced.

The Board acts as purchasing agent in Canada for the Admiralty, the Timber Controller, the Department of Aeronautics, the War Office, and the Ministry of Shipping.

The Board is acting as agent for the United States Ordnance Department in arranging for contracts and supervising their completion for munitions and supplies, which the Ordnance Department desires to secure in Canada.

The work of the Board is divided into a series of departments. Business men have been asked to take charge of these departments, of which they are called "directors." These departments number about twenty, and the directors carry on their duties in Ottawa, in Toronto, in Vancouver, in Victoria, in Washington, D.C., and in London, Eng.

The Purchasing and Steel Department buy all the materials entering into munitions; arrange for the forging of steel, and distributes the forgings and components to the machining plants situated in the various Provinces between the Atlantic and the Pacific.

The Shipbuilding Department purchases and supervises the construction of engines and boilers for the wooden ships, purchases the timber and supplies for the hulls, and has an operating section which is installing the engines, boilers and equipment in these boats. The department arranges the contracts for the steel boats under construction.

The Explosives Department operates the national plants producing nitrocellulose and cordite powders, and trinitrotoluol, with the necessary acid plants; and operates the plants producing acetone and methyl-ethylketone.

The Forging Department operates the national plant, British Forgings, in which steel turnings are melted in electric furnaces, and subsequently the steel is forged into 6 inch forgings.

The Aeronautic Department operates the plant producing aeroplanes, and under a constructive section builds all aerodromes, machine shops, barracks and officers' quarters at the various camps, as well as purchases all supplies and equipment for the Royal Flying Corps.

The Timber Section, producing aeroplane spruce and fir, conducts logging operations in British Columbia, and operates tugs for the delivery of the logs to the mills which cut them for account of the Board under supervision of the Board's officers. These logging operations call for the production of 300,000,000 feet of spruce logs, in 60 camps, placed in territory over 600 miles north and south. The department also purchases all the timber secured from Canada for England and France.

The Fuse Department operates the national plant British Munitions, where time fuses are loaded.

The Engineering Department checks and rectifies all gauges, keeping for this purpose a staff of engineers and an operating force of expert tool makers, and machine shops under their direction.

During the past twelve months the Transportation Department of the Board traced and recorded the movement of 1,500,000 tons of commodities consigned to various factories in Canada, and 785,000 tons for export overseas.

The accounting is carried on by a staff of 360 men and women. Thirteen ledgers, upon which the accounts are carried, are balanced every night, when a corps of auditors take charge of the books and the business of the previous day is completely checked and audited before the business of the succeeding day commences.

The work which has been accomplished by the Board has only been possible through the co-operation and serious service of a large body of men and women who have felt a pride and satisfaction in identification with the work. The major portion of the senior men have been taken from prominent positions in business and professional life and have served without remuneration.

Manufacturers have shown resource, capacity and courage in a field in which they had had no previous experience. Workmen and workwomen have become expert in operations requiring fidelity and accurate working to fine dimensions, for which their previous occupations had not fitted them. The proficiency which has been established reflects the intelligence and adaptability of Canadian workmen.

In the report issued by the War Cabinet for the year 1917, there appears the following:

"Canada's contribution during the last year had been very striking. Fifteen per cent of the total expenditure of the Ministry of Munitions in the last six months of the year was incurred in that country. She has manufactured nearly every type of shell from the 18 pounder to the 9.2. In the case of the 18 pounder no less than 55 per cent of the output of shrapnel shells in the last six months came from Canada, and most of these were complete rounds of ammunition which went direct to France. Canada also contributed 42 per cent of the total 4.5 shells; 27 per cent of the 6 inch shells; 20 per cent of the 60 pounder H. E. shells; 15 per cent of the 8 inch and 16 per cent of the 9.2 inch. In addition, Canada has supplied shell forgings, ammunition components, propellants, acetone, T. N. T., aluminum, nickel, nickel matte, aeroplane parts, agricultural machinery and timber, besides quantities of railway materials, including no less than 450 miles of rails torn up from Canadian railways which were shipped direct to France."

It may interest you to know that the production of 6 inch shells in Canada now represents somewhat more than 40 per cent of the total production of this shell required to serve the guns at the front. The 55 per cent shrapnel referred to in the War Cabinet's report covers the type of shell so freely used in the barrages which are employed for the protection of troops advancing to attack, or for the defeat of the enemy when making an attack.

At the time of the greatest activity, 35,000 women were employed in the various plants producing munitions.

Our Front-Line Food

From H. V. Thomson

Chairman, Canadian Food Board

THE campaign in Canada for conservation of essential foodstuffs has already met with gratifying results. AS COMPARED WITH PRE-WAR EXPORTS, CANADA'S NET SHIPMENTS OF BEEF HAVE BEEN INCREASED BY NEARLY 75,000,000 POUNDS. OUR EXPORTS OF PORK PRODUCTS HAVE BEEN JUMPED BY 125,000,000 POUNDS. WE HAVE INCREASED OUR EXPORTS OF BUTTER BY BETWEEN 11,000,000 AND 12,000,000 POUNDS. The pledge card canvass brought home to the public the necessity for conservation and the loyal co-operation of tens of thousands of housewives has been secured by voluntary methods. The increase in the amount of fish, which is being consumed in Canada as a result largely of the Food Board's efforts, is amazing. Canada has also exported more wheat this year than would have been possible without the conservation campaign and special organization of our food resources in the interests of winning the war. It is not claimed that these increases have been due solely to activities of the Food Board, but the work of the Board has undoubtedly been responsible in very considerable measure.

The Board aims to regulate profits so that the price of any article of food shall not exceed the