

EXPANSION OF MINERAL INDUSTRY ESSENTIAL

Canada pays more money for imported mineral products than she receives from her mines, the commission of conservation reminds us. The value of the mineral production for the calendar years 1913, 1914 and 1915 was \$145,600,000, \$128,865,000 and \$137,100,000 respectively. The imports of products of the mine and manufactures of mine products for the same years were valued at \$259,300,000, \$181,676,000 and \$146,324,000. As the imports also include manufactured, or partly manufactured products, they are much more valuable than the minerals we produce. If, however, Canadian minerals were turned into manufactured products in Canada, the present trade balance in minerals would be reversed.

It is only fair, though, to point out that Canada is under serious disadvantages in the matter of manufacturing. The relatively small and scattered population makes distribution from points of production to points of consumption both difficult and costly. Similarly, where, for example, coal is essential for reducing ore and for manufacturing, the cost of transportation necessary to bring the two raw products together, bears heavily on manufacture. Copper, zinc and lead are produced principally in Western Canada, while the manufacturers and chief markets are in eastern Canada. In spite of these handicaps, a comparison of the figures for imports and those for production shows the opportunity that exists for developing a home market that will increase as the war goes on. Premier Lloyd George in his recent address stated that "Economic conditions at the end of the war will be in the highest degree difficult. . . . There must follow a world shortage of raw materials, which will increase the longer the war lasts, and it is inevitable that those countries which have control of raw materials will desire to help themselves and their friends first."

The mineral resources of Canada, if developed, could supply not only our own needs but also permit the exportation of a surplus to other parts of the British Empire. There is, in Canada, an urgent need for production to pay for our war debt and borrowings before the war, and if we are to get the greatest value out of our mineral industry it is necessary that our metals and minerals be refined and made into manufactured or partly manufactured products in Canada. The production of certain mineral products in Canada has been stimulated by the war and new industries created. In the period of reconstruction, after the war, it will be necessary to safeguard and provide for the further extension of these industries.—From "Conservation."

THE EXPERIMENTAL PLANT AND SANITARY ENGINEERING SERVICE

"At the Experimental Plant of the Provincial Board of Health problems arising in connection with sewage disposal and purification of public water supplies are studied. Units of appliances, such as mechanical slow sand filters, sewage tanks, sludge plants, etc., are established and their capacities and values tried out. In this way the Board through the Engineer is able to offer expert advice to municipalities proposing to erect a water purification plant or a sewage disposal works. For all of these works plans, specifications and an engineer's report are required by law to be presented for approval of the Board. If the plans are faulty, too expensive, inadequate or unsuitable for the work in hand they are checked up by the Board's Engineer and the municipality is often saved considerable unnecessary expense and trouble.

"The volume of work of this character is bound to become very extensive in Ontario. In a recent year upwards of four million dollars' worth of work of this character passed through the hands of the Board."—Public Service Bulletin, Province of Ontario.

A vertical water turbine which tested at 94.5% efficiency, has been installed at Copper Cliff, Ont., for the International Nickel Co., by Henry Holgate, consulting engineer, Montreal. The unit delivers about 9,000 h.p., operating under 85-ft. head.

The quantity of cement imported into Canada from the United States is being reduced yearly. In 1913, there were imported 986,464 barrels; 1914, 88,591 barrels; 1915, 51,240 barrels; 1916, 19,692 barrels. The value of the 1913 importations was \$1,580,506, and of the 1916 importations, \$31,067, showing a reduction of over one and a half million dollars.

RECEIVER FOR CENTRAL RAILWAY

Judgment has been rendered by Sir Walter Cassels, sitting in the exchequer court, Montreal, rejecting the petition of the directors of the Central Railway Company of Canada for confirmation of a scheme of arrangement between that company and its creditors. Immediately following the rejection of the scheme of arrangement an application was made by John W. Cook, K.C., counsel for the City Safe Deposit and Agency Company, Limited, of London, England, who are trustees for the bondholders, asking for the appointment of F. Stuart Williamson, of Montreal, as receiver. This application was made in a suit taken by the trustees, which has been pending for some time. The application was granted and Mr. Williamson was sworn in as receiver.

These judgments are the culmination of various legal proceedings in the exchequer court concerning the affairs of the Central Railway Company, of which C. N. Armstrong is president, having succeeded to this office upon the death of the late Senator Owens.

The other directors of the railway are W. D. Hogg, K.C., E. A. D. Morgan, J. T. Bethune, J. O. Dupuis and J. D. Wells, the latter having also acted as secretary of the company. Apart from certain subsidiary roads, it was intended that the main line of the Central Railway should run from Montreal to Midland, but only twenty miles have been partially constructed. Bonds to the value of more than £427,000 have been issued, these being largely held in England and France. These bonds do not seem to have been highly regarded by the Canadian investing public.

A SOURCE OF TOLUOL

There is an almost untapped supply of toluol, the basis for T.N.T., in the form of a waste product of a sulphite pulp mill. This waste material is the spruce turpentine which can be collected during the cooking in a simple apparatus whose cost is estimated at less than \$100. The collection of the spruce turpentine is simple and the material can be shipped for refining to a central point by means of drums, tank cars or barrels. If any acid reaction is found after collection this may be neutralized with lime, but care in collection will eliminate this difficulty. It is probable that the crude turpentine can easily stand a shipment of requiring 14 days in transit. A refining plant handling 500 gallons per day of the crude material is about the smallest commercial unit. At present prices for toluol, \$5 per barrel for the crude material might be obtained. Experiments and estimates as well as actual practice have shown that one gallon of crude turpentine per cord of wood is not an impossible yield. The yield, however, varies with a number of factors, such as, the kind of wood, its age and condition, method of cooking and the process of collection. A plant in New Jersey is making 1,000 gallons of toluol a week now and could make much more if the spruce turpentine were available.—Exchange.

NEW SHIPBUILDING ENTERPRISES

A number of representative citizens of Sault Ste. Marie called upon Sir William Hearst, premier of Ontario, recently to discuss with him plans for establishing a shipbuilding industry at Sault Ste. Marie. Before the war steps were taken to establish a shipbuilding plant and drydock, but work has been delayed. Now it is proposed to begin the construction of wooden ships in connection with the steel plant, with a view to steel-ship construction later.

The British Columbia shipbuilding programme is to be augmented by the construction of forty wooden ships, aggregating a total of 140,000 tons. Twenty of these ships will be built in Victoria by a syndicate of capitalists, headed by J. G. Price, president of the Cameron-Genoa Mills Shipbuilding, Limited, the new shipbuilding concern to be known as the Victoria Shipbuilding, Limited, while the remainder will be built by the British-American Shipbuilding and Engineering Company, Limited, which had secured the lease of a shipbuilding site on the old Kitsilano Indian reserve at Vancouver. The larger company is headed by J. A. Sears, of Vancouver.