

SOME CANADIAN DRYDOCK SCHEMES.

A drydock is to be constructed at Owen Sound by the Canadian Shipbuilding and Dry Dock Company, Limited. This corporation has capital of \$2,000,000 and an Ontario charter. The head office is at Owen Sound. The company has authority to manufacture and deal in iron, steel and other metals; to construct and operate drydocks, harbors, elevators, warehouses, terminals, wharves, etc., and to carry on the business of a wrecking company.

The municipality of Owen Sound has decided to grant a subsidy to the company, which amounts to a cash bonus of \$10,000 a year for a period of 20 years. This bonus is contingent upon the fulfilment of an agreement whereby the operating company must employ at least 200 men daily for an average of 300 days in each year. The company will be exempt from taxes, except school taxes, for a period of ten years. A site for the dock and plant has been selected on the bay shore of the city. The dock is to be 775 feet long from caisson groove to head peak, 104 feet wide at the top and 21 feet over the sills.

Those interested in the enterprise are Mr. F. F. Wood and Mr. E. D. Pitt Niagara Falls, Ontario; Mr. F. J. Nelson and Mr. John Roche, Buffalo. Mr. Pitt states that plans are being filed with the Dominion government and that the company's plant will be the largest and most complete for ship repair and shipbuilding and have the largest drydock on the great lakes.

The Dominion government has passed an order-in-council for a subsidy to the Amalgamated Engineering Works, Limited, of British Columbia, amounting to a maximum of \$5,500,000, at 4 per cent. interest for a period of 35 years.

The subsidy is for the purpose of erecting at Vancouver modern drydocks to cost over \$6,500,000. The plant of the company is to be located at North Vancouver, and will contain a drydock 1,150 feet long, capable of being divided into two sections of 650 and 500 feet in length, with a width of 100 feet.

Another large shipbuilding and drydock plant is proposed by the Dominion Shipbuilding, Engineering and Dry Dock Company, Limited, of Vancouver, B.C. Plans and specifications have been completed for the major part of the work. The plant will be located on the Burrard Inlet at Vancouver, B.C., and ultimately will represent an expenditure of about \$2,800,000 for machinery, building and construction. It will have a graving dock, constructed of reinforced concrete, 1,000 ft. long and 100 ft. wide. Adjacent to the graving dock will be two marine railways and alongside of dock, wharves will be constructed to serve the traffic of the plant. One of these railways will handle vessels up to 1,000 tons, and the other vessels up from 1,000 to 4,000 tons. Seven shipbuilding berths will be constructed. Lynn Creek, a fresh water stream, located on an eastern edge of the rib will be dredged and retaining walls built on either side. The stream will then serve as a cleaning out basin and also as a fitting out basin.

The buildings for fabrication and general construction purposes will be located directly in the rear of the shipbuilding yards. The principal structures and their estimated costs are as follows:—

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| Machine shop, 250 ft. x 68½ ft. | \$30,000 |
| Pattern shop, 225 ft. x 137 ft. | 30,000 |
| Boiler shop, 250 ft. x 68½ ft. | 20,000 |
| Blacksmith and general forging shop, 250 ft. x 68½ ft. | 30,000 |
| Angle and plate shed, 600 ft. x 100 ft. | 60,000 |
| Woodworking shop, 100 ft. x 200 ft. | 35,000 |
| Copper shop, brass foundry, etc., 75 ft. x 125 ft. | 45,000 |
| General stores building, 75 ft. x 100 ft. | 20,000 |
| General office building, 60 ft. x 90 ft. | 10,000 |

These buildings, with the exception of the last two, will be of steel frame construction with corrugated iron covers and concrete floors with asphaltum top. The general stores building will be similar except that the floor will be concrete without the asphalt surface. The general office building will be of brick and wood.

The principal item of expenditure will be for the graving dock; this with its puming plant is estimated to cost \$1,500,000. The improvement of Lynn Creek will cost about \$225,500. The stream will be dredged to a depth of 25 ft. and a width of 200 ft., for 1,800 ft., and retaining walls constructed on each side. The creek will be straightened out into a straight canal by diverting its channel. Wharves will be built on the top of the western retaining wall.

There will be two main wharves, one 900 ft. long, estimated to cost \$12,000, the other 1,200 ft. long to cost \$22,000. On the end of the longer wharf a hammerhead crane of 100 tons capacity will be erected. This will cost about \$100,000. There also will be two marine railways, one of 1,000 tons capacity and one of 4,000 tons capacity, the cost, with power plant, being \$15,000 and \$130,000 respectively.

The Lake Superior Dry Dock and Construction Company, Limited, with an authorized capital of approximately \$1,000,000, and a bond issue of £157,000, was recently organized to build a drydock at Sault Ste. Marie, Ont. In November, 1913, the city of Sault Ste. Marie voted a subsidy to the company of \$20,000 per annum for a period of 20 years, subject to the payment by the company of taxes on a fixed assessment, which would return to the city about \$10,000 annually. The Dominion government has granted a subsidy of 3 per cent. per annum on \$1,386,528 for a period of 20 years. The bonds are said to have been underwritten in London and Messrs. Hoare and Company, of London, are trustees for the bondholders. Not long ago, the permanent board of directors was elected, the following being the list:—Mr. C. G. Bryan, director of the Canada Steamship Lines, Limited, director of the Richelieu and Ontario Navigation Company, director of Palmer's Shipping and Iron Company, Limited, London, England; Mr. Frederick R. De Bertadano, director of the General Accident Fire and Life Assurance Corporation, London, England; Mr. Rowland Hodge, director of the Northumberland Shipbuilding Company, Limited, of London, England; Mr. Francis Somerscales, late general manager of the Earles Shipbuilding and Construction Company, Limited, Hull, England; and Mr. Percival T. Rowland, barrister, Sault Ste. Marie, Ontario. The company's consulting engineers are Sir Douglas Fox and partners, of London, England.

In June, a payment of \$25,000, the price agreed upon for their site, was made to the city of Sault Ste. Marie. Prior to the outbreak of the war, arrangements had been completed by this company, by which their bankers were prepared to advance them a sufficient amount against their underwriting agreements to enable them to commence construction at once. The agent of the contractors, the British Construction Company, and his staff, sailed from England for Canada on July 24th, with the intention of making arrangements to start immediately work on the drydock. The necessary machinery was shipped and is now on the ground. Owing to the conditions brought about by the war, the enterprise will be held in abeyance in the meantime.

The construction of the floating drydock and ship repairing plant of the Grand Trunk Pacific Railway Company at Prince Rupert, B.C., is making good progress. The first pontoon was launched August 24th. The second pontoon or section will be launched during September and within the next 60 days a section of the drydock will be available for repairs to craft in that locality.

The Drydock Subsidies Act of 1910 gives encouragement to enterprises of this nature. This act differentiates between first and second-class docks as follows:—

"A first-class dock shall be capable of receiving and repairing ships of at least 25,000 tons; shall cost not more than \$4,000,000; and bonds to this amount or less shall be guaranteed for a term of 35 years.

"A second-class dock shall be capable of receiving and repairing ships of 15,000 tons; the cost shall not exceed \$2,500,000; and the bonds shall be guaranteed for the term of 15 years."

Dawson, Yukon Territory, is planning to establish a municipal electric lighting and telephone plant at an estimated cost of \$165,000. The Dawson civic league, which is planning various improvements, recently petitioned the Yukon council against the annexation of the territory to British Columbia, and the surrender of its independence.

About 65 per cent. of the permanent way of the Swiss Federal Railways is equipped with steel sleepers. The weight of the sleepers is 25.16 kilos. per running metre, and when the holes for the rail attachments are complete they weigh 72.5 kilos. (159.8 lb.) each. The tensile stress specified is from 35 kilos. to 45 kilos. per square millimetre, and the entire trough piece must be capable of being bent back double without showing any crack. At the switches double-trough sleepers are used, which weigh 125 kilos. (275.5 lb.) each.