

Electrically Propelled Vessel of the Lake Trade.

The development of the Canadian canal freight vessel offers as interesting a puzzle to the naval architect and marine engineer as any other class of boat. Nothing is more interesting than to notice how local conditions, such as exist on the Rhine, Danube, St. Lawrence or Mississippi, and other of the great natural waterways of the world, with their canal systems, prescribe a peculiar type of boat. The dimensions of the Canadian canals are of course fixed by the size of the locks through which it has to pass, but as the rush of trade at the beginning and end of the navigation season becomes more and more serious, every inducement is offered in the construction of new types to increase the dead-weight carried each trip on the limiting draft of 14 ft. Hence, no doubt, the experiments now being carried on with various types of internal combustion engines, which by their lightness in weight (both of the engine itself and its fuel), enables a considerable addition to be made to the dead-weight.

The latest proposal, which was referred to in Canadian Railway and Marine World for September, is that now being built in England for the Montreal Transportation Co., in which the propelling power will be generated by twin sets of Diesel engines, each of 300 break h.p. direct coupled to an electric generator, which will furnish current to the propelling motor keyed on to the propeller shaft just ahead of the thrust block. Speed change and reverse will be controlled by a simple treatment of switches which can be handled either from the bridge or engine room without reference to the generating engines, which run steadily in one direction under governor control. Either engine may be cut out for adjustment and there will, of course, be no reverse complication. The introduction of the electrical drive will, it is claimed, enable all the advantages of a twin screw arrangement to be obtained without interfering in any way with the usual form, dimensions and revolutions of the single propeller of the lake type, which has been specially designed, after years of experience with steam, to enable the canal type of boat to be quickly manoeuvred in the canal channels and locks. This is a feature of great importance which, it is said, cannot possibly be obtained with a direct Diesel drive. The new vessel, which will be called the Tyne-mount, is to be delivered in Montreal early in the season of 1913, and its advent on the lakes will be awaited with interest. Unquestionably, marine propulsion appears to be on the eve of developments of a most revolutionary nature.

Dominion Hydrographic Steamship for the Atlantic Coast.

The contract for the construction of a hydrographic steamship for service on the Atlantic coast, for which tenders were recently received by the Naval Department, has been awarded to Swan, Hunter and Wigham Richardson Ltd., Wallsend-on-Tyne, Eng., the vessel to be completed by July 1, 1913.

A full description of this vessel was given in Canadian Railway and Marine World for July, and an illustration was given in the August issue, but we have been officially advised of the following amended particulars:—length between perpendiculars, 170 ft.; beam, 33½ ft.; draught, 11 ft.; displacement, 1,050 tons; average speed, 12 knots an hour.

The Projected Welland Ship Canal.

The route of the projected Welland ship canal has only been very generally decided upon, and there are several points which have yet to be carefully considered, and definitely settled. As soon as this has been done, the plans will be submitted to the Minister of Railways and Canals for approval. The canal generally will follow the present one from Port Colborne to Thorold, Ont., and from thence by a new route, almost direct to McCalla's Grove, situated three miles east of Port Dalhousie, the locks all being located between Thorold and Lake Ontario. The new canal will cross the present canal below lock 11 on the same level, so that smaller vessels will be able to enter either at Port Colborne or at McCalla's Grove.

The total length of the projected new canal is 25 miles, in which there will be seven lift locks, each 800 by 80 ft., and each with a lift of 46½ ft., with 30 ft. of water on the sills. J. L. Weller, M. Can. Soc. C.E., St. Catharines, Ont., is the engineer.

The Rule of the Road at Sea.—A manual on the rule of the road at sea and precautionary aids to mariners, by D. H. Hayne, has been published by the Co-operative Publishing Co., Baltimore, Md. The subject matter is, generally speaking, a digest of the rules and regulations of the Bureau of Navigation, Steamboat Inspection Service, the War Department, Bureau of Light-houses and Coast and Geodetic Survey and the Hydrographic Office of the U.S., with general definitions, comments and applications of the U.S. laws regarding navigation, and comparisons with British navigation laws. While the work is of interest to deep sea navigators, covering as it does, the subject of icebergs, and other matters of recent public interest in that connection, it appears to be chiefly written for motor boat operators, small sailing craft, and yachtsmen. The price is \$3.25, including postage.

The Profession of the Engineer.—In a volume of addresses to engineering students, J. A. L. Waddell and J. L. Harrington have collected and arranged a large number of papers and addresses written or delivered by well-known authorities on many phases of the life and work of civil, electrical, mechanical and mining engineers. The object of the editors is the providing of sound advice to students of engineering and young engineers, so as to indicate how to obtain the full benefit of the course of instruction, how best to conduct themselves at college and in after life, and how to start a successful professional career. The work has been adopted as a text book in a large number of colleges in the United States, and although only issued in 1911, has already reached a second edition. It is issued at the nominal price of \$1—the cost of printing—by Waddell and Harrington, Kansas City, Mo.

The President of the British Board of Trade has appointed a departmental committee on boats and davits to report on the most efficient method of stowing, launching and propelling ships' boats.

Basing the estimate on the amount of fuel required by the s.s. Selandia of 2,500 h.p., and assuming a consumption of 11½ tons of oil a day, it is estimated that the s.s. Mauretania would require 313 tons of fuel a day, or 1,487 tons for a run across the Atlantic. It is estimated that if the Mauretania had a double hull, with 1 ft. between the two skins, she would have storage space in her sides of about 56,240 cu. ft., which would be sufficient to contain the oil necessary to carry her across the Atlantic.

Telegraph and Cable Matters.

The G.T. Pacific Telegraph Co. has opened offices at Baird, Ont., Ottho, Ebenezer and Oban, Sask.

S. F. Butzer has been appointed manager, Great North Western Telegraph Co.'s office at Sherbrooke, Que., vice H. F. Byrd.

The Canadian Northern Telegraph Co. has opened offices at Birch river, Man.; Edam, Marengo, Meota, Mistatim and Waseca, Sask., and has closed its offices at Mafeking, Man., and Fuller, Sask.

The Great North Western Telegraph Co. has opened an office at Sixteen Island Lake station, Que., and has closed its offices at Crystal Beach, Donald, Gorrie, Petawawa camp, Rosseau, Royal Muskoka hotel, Zurich, Ont., Cap Sante, Les Eboulements wharf, Manoir Richelieu, Montfort station, Pointe au Pic and Verdun, Que. Its office heretofore known as St. Constant jet., Que., will in future be known as Delson jet.

Wireless telegraph service will be instituted between New York city and Norway, according to an announcement of the Marconi Co. of America. The United States plant will be owned and operated by the company, while the Norwegian station will be government property. The receipts of the two stations are to be pooled and divided equally between the company and the Norwegian government. The company will receive \$350,000 for the foreign station, exclusive of site and foundations (about the price to be paid by the British government for each station in its proposed imperial system), and will secure a royalty of 10% of the gross receipts for 25 years.

Further negotiations between the C.P.R. and its telegraphers regarding rates of pay, etc., were reported to have been concluded, Sept. 18, the company having granted an all round increase of 12%, including overtime, and establishing a 10 hour day standard, instead of 11 hour, as hitherto. D. McNicoll, Vice-President, is reported to have stated that a definite settlement of all matters at issue had been arrived at, and a final agreement would be drawn up. It was also stated that the minimum wages paid to operators at the smaller stations was \$65 a month, and for night operators \$53 a month, the agents at larger stations receiving \$80 to \$110 a month, and operators \$70 a month under the old schedule. The board of conciliation, which dealt with the matter some time ago, recommended an increase of 10%, which the company accepted, as mentioned in our last issue.

It is announced that the Western Union Telegraph Co., on account of representations made by the Postmaster-General of Great Britain and Canada, has made reductions in cable rates, as follows,—for cables in plain words, the present deferred rate of 12c. a word, reduced to 9c., and instead of being subject to 24 hours' delay, will be transmitted with only the delay necessary to give priority to the full rate cables; a lettergram service will be inaugurated, the rate being 72c. for 12 words, and 5c. for each additional word, to be delivered on the morning of the day following handling; the week end letter cable rates will be, \$1.08 for 24 words, with 5c. a word additional, delivery on Monday; press cables reduced from 10c. to 7c. a word (already in force, but the nine hours' deferment is eliminated). In addition to the foregoing there will be a special press rate, between 12 midnight and 6 a.m., of 5c. a word, and these rates are also applicable between 1 and 4 p.m., Montreal time, equivalent to 6 and 9 p.m., London time, and messages are not subject to deferment.