

Huron, 0.49 ft. above; Erie, 0.06 ft. below, and Ontario, 0.13 ft. above.

Canada Steamship Lines' s.s. Wahcondah, which has been engaged in ocean service latterly, has been sold to a British firm for £46,000. She was built at Port Glasgow, Scotland, in 1903, and is of steel, with 4 watertight bulkheads, with triple expansion engines with cylinders 12, 28 and 47 in. diam. by 33 in. stroke, 750 i.h.p. Her dimensions are,—Length 230 ft. 4 in., breadth, 37 ft. 1 in., depth 24 ft.; tonnage, 1,554 gross; 996 register.

Navigation on the Great Lakes closed, officially, Dec. 1, when ordinary marine insurance expired, but as customary, certain insurance was extended for 12 days, and general navigation was suspended Dec. 12, for the winter. Several vessels continued operations beyond that date. The losses for the year were comparatively small, and the underwriters are reported to have had a profitable season.

The demand for ocean tonnage amongst Great Lakes shipping is reported from Cleveland, Ohio, to be continuing strong. Further orders have been placed there recently for new tonnage of Welland Canal size for ocean service, for delivery in the early autumn. It is stated that builders will be unable to take all the orders offering, owing to the uncertainty of obtaining materials in reasonable time. It is also stated that a number of lake vessels have been sold and are being taken to the Atlantic Coast.

J. W. Norcross, Vice President and Managing Director, Canada Steamship Lines, Ltd., who returned recently from Great Britain, is reported to have stated that negotiations had been completed for the chartering of 15 steamships for ocean service for 1917. During the past year, 18 of the company's steamships were engaged in this trade under charter, and it is expected that eventually the number of vessels so engaged for 1917 will be the same. The rates obtained are considerably higher than those paid in 1916.

The Board of Grain Commissioners has issued a statement showing that during the past year a record was created in the shipping of grain cargoes for Port Arthur and Fort William, both in number and quantity. In 195 Canadian, and 565 U. S. vessels, 253,969,599 bush. of all kinds of grain were carried east. This was an increase of 341 cargoes and 52,200,000 bush. over 1915, and was more than double the amount shipped in 1914. In 1914, U. S. vessels carried only one-third of the grain shipped from the head of the lakes, but in 1916, Canadian vessels carried only 13,000,000 bush. more than U.S. vessels.

Reports are current in Montreal that Canada Steamship Lines Ltd. has secured control of the Montreal Coal and Dock Co., that it may in the near future get control of the Montreal Transportation Co., and that it is negotiating for the control of an important Ontario shipping company. Canada Steamship Lines' officials are reported to have stated that while the Montreal Coal and Dock Co.'s property has been secured, there is no ground for the report regarding the Montreal Transportation Co. So far as the Ontario shipping concern is concerned we may say that negotiations were in progress some time ago for acquiring a very successful shipping company, but the matter was dropped for a time.

The Timiskaming Navigation Co.'s property, including four steamboats, the Jubilee, Meteor, Silverland and Temiskaming, and wharf and dock accommoda-

tion at Haileybury, was reported recently to have been sold to P. Gibbons, but we are officially advised that no sale has as yet been concluded. An order for the winding up of the company was made in Toronto, Sept. 25, 1914, and Jas. Hardy, Toronto, was appointed liquidator. Since then the property has been operated by P. Gibbons, under lease from the liquidator. Several propositions are under consideration, but at the time of writing, no offer for taking over the property has been accepted.

Lt. Col. W. P. Anderson, Chief Engineer, Marine Department, was at Midland, Dec. 14 and 15, for the purpose of noting ice conditions there, and if necessary organizing a service to keep the harbor clear so as to enable all vessels still out to enter. On arrival he found that practically all the vessels were already in port. The bay was covered with solid ice from 2 to 3 in. thick, but as the Dominion Government s.s. Simcoe had just gone out and the tug Pratt had crossed from Midland to Port McNicoll a couple of times, vessels were experiencing no difficulty in making port. Some moving of the vessels was necessary to enable them to come in succession under the elevator legs for discharging, but this was work to be done by the vessel owners.

The Sault Shipping Co., Ltd. has purchased the s.s. Valcartier from Lake Commerce, Ltd., Toronto, and it is announced that on the reopening of navigation it will be operated under the management of the Algoma Steel Corporation, Sault Ste. Marie, Ont. The s.s. Valcartier, formerly William Henry Mack, was built under special survey at Cleveland, Ohio, in 1903, and is constructed on the channel system, with steel tank top, three watertight and two non-watertight bulkheads, steel boiler house, steam pump wells, and complete electric installation. The hold is divided into 4 compartments, with hatches spaced 24 ft. centres. She is equipped with triple expansion engines, 20, 33½ and 55 in. diam., by 40 in. stroke, 1,170 i.h.p. at 85 r.p.m., and is supplied with steam from 2 Scotch boilers 12 ft. 10½ ins. by 13 ft. at 175 lbs. Her dimensions are,—length 354 ft., breadth 48 ft., depth 28 ft.; tonnage, 3,748 gross, 2,250 register.

Obstruction in Lake Superior.—The United States Lake Survey is in receipt of a report made by Capt. Samuel Hill, of the St. Lawrence & Chicago Steam Navigation Co.'s s.s. J. H. G. Hagarty, concerning an obstruction encountered by his vessel in Lake Superior on the evening of Nov. 4. The vessel, bound down from Fort William, had proceeded about 38 miles on a course 121° (SE. x E. ¼ E.—true) taken from a point 1 mile south of Passage Island, when she came in contact with some obscure obstacle, breaking off three flanges of her wheel, no other part of the vessel appearing to have been hit. As there was no metallic sound attending the striking, it is assumed that the obstruction was of wooden formation. The damage sustained by the vessel indicates that the obstacle, if still in the locality reported, is a dangerous menace on the direct course from Passage Island to Whitefish Point, and mariners are cautioned accordingly.

The Turn of Tidal Streams in Relation to the Time of the Tide is the title of a paper read by W. Bell Dawson, Superintendent, Tidal and Current Survey, before the Royal Society of Canada in May, 1916, and an abstract of which has been issued in booklet form.

Manitoba, Saskatchewan and Alberta.

Plans have been filed with the Public Works Department at Ottawa, and at Winnipeg, by Brown & Rutherford, Winnipeg, for the construction of a wharf or dock on the Red River at Winnipeg. The site covers lots 25 and 26 in St. John Parish, from the intersection of the northerly limit of Sutherland Ave. with the easterly limit of Buchanan St., 597.5 ft. to the northwesterly limit of the proposed dock lines, and thence easterly for 315 ft. and southerly along the north limit of Higgins Ave. to 50 ft. from the northwestern limit of land taken for the right of way of the Manitoba Southwestern Colonization Ry., and thence southwesterly to the southwestern limit of Sutherland Ave.

British Columbia and Pacific Coast.

Yarrows, Ltd., Victoria, B.C. are reported to have received an order for a stern wheel, shallow draught steamboat, similar to the one built there recently, for operation in Indian waters.

The Canadian Robert Dollar Co., Ltd., has acquired about 40 acres on the north shore of Burrard Inlet, where, it is reported, a sawmill and docks are to be erected.

The Canada West Coast Navigation Co.'s auxiliary vessels Geraldine Wolvin and Mabel Brown, will, as soon as they are out of the builders' hands, be chartered to the Canadian Trading Co., for loading lumber in March or April, at Vancouver, for Sydney, Australia, at 120 shillings, and for Melbourne, Australia, at 130 shillings.

The Dominion Government s.s. Quadra, which was used until recently as a light-house tender on the Pacific Coast, has been sold to the Howe Sound Mining Co., and will be utilized for carrying ore to the company's smelter at Tacoma, Wash. The Quadra was sunk in Nanaimo harbor, Feb. 26, 1916, in collision with the C.P.R. s.s. Charmer, and was raised and practically rebuilt to suit the ore trade.

A steamship company is being organized in Prince Rupert to operate vessels in the Southeastern Alaska trade. It is stated that the company will work as an independent concern, but will handle freight to and from the Grand Trunk Pacific Ry., and is reported to have made contracts for the carriage of a large quantity of fish from the canneries, and to have arranged for the chartering of one vessel.

The White Pass & Yukon Ry. is reported to be building 2 stern wheel steamships for service on Taku Arm and the Atlin Lake to replace the steamships Gleaner and Scotia. The two latter vessels have been run ever since the company has operated between Carcross and Golden Gate, and the growth of the tourist traffic has made the improvement of the boat service a necessity. The company is also reported to be considering the building of 2 additional steamships, at an approximate cost of \$200,000, for the tourist business between Whitehorse and Atlin.

It was anticipated that the breakwater at Victoria would be practically completed by the end of December. The work at Ogden Point was commenced in 1913. The breakwater consists of three arms, the first running out from the shore being 550 ft. long, the middle or main arm being 1,500 ft. and the extreme arm, 700 ft.