

equipped with triple expansion, jet condensing engines, supplied with steam from a Scotch boiler. It is anticipated that she will be completed by July 15.

It is reported that work on the construction of the projected dry dock at Sault Ste. Marie, Ont., will be commenced Apr. 30, and that it must be completed by Oct. 1, 1914. It is stated that the financing of the enterprise has been completed in England, and that Pethick Bros., Plymouth, Eng., have undertaken the work, the cost being about \$1,000,000.

The U. S. Circuit Court at Cincinnati, Ohio, has decided that the Great Lakes Towing Co. has had a monopoly of the towing business of the 14 principal ports on the Great Lakes for the past 13 years, and that it is driving out of business the formerly numerous independent tug companies, and, having violated the anti-trust laws, must be dissolved.

During 1912, the Government elevator at Port Colborne handled 12,100,000 bush. of grain, this being the largest quantity handled by any elevator on the lakes, except the G.T.R. elevator at Tiffin, which dealt with 13,680,000 bush. The capacity of the Port Colborne elevator is 750,000 bush., and it has decided to increase it to 2,000,000 bush.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above tide water, for January, as follows.—Superior 601.84; Michigan and Huron 580.08; Erie 572.27; Ontario 246.51. As compared with the average January levels for the past ten years, Superior was 0.24 ft. below; Michigan and Huron, 0.06 ft. above; Erie, 0.58 ft. above; and Ontario, 1.08 ft. above. It was anticipated that Superior would fall 0.2 ft., Michigan and Huron remain stationary, Erie fall 0.1 ft., and Ontario rise 0.1 ft., during February.

The storage capacity of grain elevators at Fort William is 24,000,000 bush., and with 57 vessels in the harbor, capable of storing another 12,000,000 bush., the available storage capacity at present is 36,000,000 bush. From information supplied, there is approximately 19,000,000 bush., now stored in the elevators and vessels, leaving available storage for a further 17,000,000 bush. We are advised that with the existing movement of grain to the seaboard by rail, it is unlikely that any grain blockade will occur at Fort William before the reopening of navigation.

The Great Waterways Union, which was inaugurated last year, with the object of keeping the claims of the St. Lawrence-Welland canal route before the Government, held its annual meeting at Berlin, Ont., Feb. 14. A resolution was adopted that in view of the early completion of the Erie barge canal and of the Panama canal, making time of great importance, the Dominion Government be urged to make larger appropriations to secure the earliest possible completion of the improved Welland canal, and to appoint a commission to report on the development of the St. Lawrence River to a depth of not less than 30 ft. for the passage of ocean vessels by the St. Lawrence and Welland canal route to the head of the lakes, and the development of waterways from Lake Superior to the western provinces, and asking that no money for construction be spent on the French River, or proposed Georgian Bay canal, until the route can be shown to be commercially practicable.

The Upper Ontario Steamboat Co. at its annual meeting at Liskeard, Feb. 9, decided that the line will not be operated during the forthcoming season, and that all the assets are to be sold immediately, and the company wound up. The report states

that the 1912 season might have been one that showed a profit had it not been for a series of serious accidents, which culminated in the sinking of the vessel S. & Y. just below Flat Rapids, in November. The result was that the revenue just about paid expenses. The advent of the Timiskaming and Northern Ontario Ry. in the Elk Lake and Montreal River territory, where the company operated, is taken to mean that navigation on the river would result in a loss to the company were it to operate for another season. The vessels are Adrelexia, Agnes, Gypsy, Geisha, S. & Y., and St. Antoine. The officers and directors who were re-elected for the current year are: President, W. J. Blair; Vice President, C. H. Fullerton; Secretary-Treasurer, F. Hardman; other directors, F. S. Bricken-den and T. McCamus.

The commissioner who was appointed to enquire into the causes of the wreck of the steamboat Mayflower, near Barrys Bay, Nov. 12, 1912, when one of the owners and 8 others lost their lives, reports gross negligence on the part of the owners, Hudson Bros., Combermere, and infringement of the Canada Shipping Act. The cause of the wreck was the parting of the seams due to heavy strain from the machinery. The timbers were sound, but alterations had weakened her. The vessel was sailed for a whole season without a certificate, and in face of repeated warnings by the Inspector of Hulls at Kingston, who had refused a certificate because there was no qualified captain aboard. The commissioner considers that the Inspector should have seized and detained the vessel, but the latter holds that that was the duty of the Customs Department, but states that the department had not been informed of the violation of the law. The remaining owner was censured for sailing without a lifeboat, which had been damaged the day before the accident and left behind, as with the lifeboat, all on board might have been saved. The crew was found to be competent, and the commissioner recommends that the Department of Marine should appoint a special official to see that no vessel not complying with the regulations shall ply Canadian waters.

Manitoba, Saskatchewan and Alberta.

The Department of Marine has established 20 spar buoys at various points on the Winnipeg River, between White Dog Island and Kenora.

British Columbia and Pacific Coast Marine.

The North Vancouver Ferry Co. is about to invite tenders for a fourth ferry steamboat, for its service between Vancouver and North Vancouver.

The Union Steamship Co. has come to an arrangement with the underwriters in connection with its wrecked steamship Vadso, by which it receives part of the insurance money, and takes over the damaged vessel.

The Union Steamship Co.'s s.s. Cheslakee, which sank at Van Anda, Texada Island, ary, and has been taken to Esquimalt for overhauling and repairs. The sinking of the vessel caused the death of seven persons.

During January, the inward and outward bound traffic of Victoria consisted of, foreign, 295 vessels, 352,908 tons; coastwise, 484 vessels, 366,359 tons, both showing considerable increases over the figures for the same period in 1911.

The West Vancouver Ferry Board had under discussion recently, the purchase of

another ferry steamboat. A report was read on the vessel Falcon, which had been inspected and recommended for the service, but no decision was arrived at.

Capt. B. L. Johnson, who has been appointed the G.T. Pacific Coast Steamship Co.'s pilot at Vancouver, was formerly master of the company's s.s. Prince Rupert. He was recently presented with a silver service by Prince Rupert citizens.

An order in council has been passed establishing a permanent harbor headline beyond which, breakwaters, wharves, piers and other structures shall not in future be built at Prince Rupert, B.C., plan and description of which have been deposited with the Department of Public Works, Ottawa, and with the District Engineer of the Department, at Prince Rupert.

The Inland Transportation Co. has commenced a steamship service between Bellingham, Wash., and Victoria, with the s.s. San Juan II., making three trips a week. The vessel is 65 ft. long, with 14 ft. beam, equipped with engine of 100 h.p., and with a speed of about 15 knots, with accommodation for 80 passengers. Should the venture prove successful, it is the intention to put larger and additional vessels on the service.

The Department of Marine has replied to the memorial of the Vancouver Ship-Masters' Association respecting aids to navigation on the coast, that consideration would be given to the request for a modern fog signal at the outer lighthouse in Porlier Pass, Strait of Georgia, and that there was good reason to hope that a lighthouse would be placed in Brown Passage, in the near future, probably on Triple Island.

The Fraser River Ferry and Navigation Co., Ltd., has been incorporated under the B.C. Companies Act, with \$100,000 capital and office at New Westminster, to acquire a license to operate a ferry on the Fraser River between New Westminster, Annacis Island, Port Mann and Coquitlam, which was granted by the B. C. Government to C. F. Macaulay, and in connection therewith to own and operate steam and other vessels, and carry on a general ferry and navigation business.

Capt. Jas. Gaudin, agent, Department of Marine, Victoria, and who frequently conducted enquiries into marine casualties, on behalf of the department, died there recently, aged 75, after a long illness. He was born in the Channel Islands, and was for several years in Hudson's Bay Co.'s service.

An estimate furnished to the Provincial Government for the establishment of direct communication between Vancouver and the Delta country, includes, approaches, waiting rooms, etc., at Ladner and Woodwards Landing, \$19,700; ferry boat, 70 ft. long, 28 ft. beam, 4 ft. draught, capable of carrying a deck load of 70 tons, and 50 passengers, \$19,000; total cost between banks, \$38,700, and work on widening dyke from Ladner to proposed ferry approach, \$1,200. If the proposed service is decided on, work will probably be started early in April.

Cost of Concrete at Panama.—The cost per cubic yard of concrete on the Panama Canal during the past fiscal year, varies from \$4.77 at the Miraflores Locks, to \$7.75 at the Gatun Locks, a total of 1,443,570 cu. yds. having been laid in that period. The labor cost per yard varied from 84 cents to \$1.54. The big difference in cost of the concrete lies in the greater accessibility to the stores on the Pacific side, the stone and sand being only a third as costly there as on the other side. 83,760 cu. ft. of concrete piling at Gatun cost \$1.57 a foot.