

Aug. & will number 5, & the yacht winning 3 out of the 5 will be selected as the cup-defender to sail against all comers on Lake Michigan.

The boats laid up in Hamilton Bay this winter are the schooners L. D. Bullock & W. J. Suffel, at the Simcoe Street slip; schooner Singapore, Capt. Malcolmson, at Zealand's wharf; Government dredges Ontario & Nipissing, at McIlwraith's wharf; T. R. Merritt, steamer Lake Michigan & the Sir Leonard Tilley, at Mackay's wharf. The 3 boats of the Hamilton Steamboat Co. are at the James St. slip, & the schooner Ella Murton is at Murton's wharf. The propeller Myles is tied up in Duluth harbor, having broken a shoe while going up Lake Superior. The Arabian is at Kingston.

The establishment of Georgian Bay grain ports should give a great impulse to Canadian inland marine. Canadian bottoms should monopolize the trade from Fort William to the Georgian Bay, just as U.S. bottoms now monopolize the trade between Chicago & Duluth & Buffalo. No Canadian vessel can carry between those points. The position would be somewhat reversed if a Georgian Bay port were made the eastern end of the upper lake system. Canadian boats could then carry from Duluth & Chicago, besides having the exclusive right between Fort William & Georgian Bay.—Toronto Globe.

Marine insurance companies have decided to raise their rates on ocean & lake traffic. The heavy losses sustained last year have induced them to take this step. New systems have been adopted by which the steamers & vessels will hereafter be graded & classified, & the rates will depend on what line the merchandise is shipped by. The rates will vary from 20c. on 1st-class ocean steamers to 25c. on 3rd-rate vessels. The purpose of this is to induce shippers to select the best water routes, & thus reduce losses to a minimum. The exact amount of the increase on the old ocean grain rates has not been decided.

The Calvin Co.'s steamer India was launched at Garden Island, Jan. 4. She is 212 ft. long, 37 ft. beam, 15 ft. hold, & built of the best white oak. She is fitted with triple expansion engines with cylinders 18, 30, 48, & a uniform stroke of 30 ins. The engines were built by the Co. at Garden Island. Her propeller wheel is 10 ft., 7 ins. diameter, with a pitch of 12 ft. Her 2 boilers are of steel of the Scotch type, 11 ft. 5 ins. diameter & 12 ft. long, carrying 160 lbs. steam. She is also fitted with several auxiliary engines, for reversing the main engine, for steering, raising anchors, etc. She will probably be used in the carrying of timber.

In our Nov. issue, pg. 249, we gave particulars of the steamer which is being built at Picton by the Lake Ontario Navigation Co. & into which the engines of the Empress of India will be put. There is a good deal of speculation as to where the new boat will run. While it is understood that she will run out of Toronto, it seems to be taken for granted that she will not go on the Port Dalhousie route. The general impression is that she will run between Toronto & Prescott, in connection with the R. & O. N. Co., as a sister boat to the Toronto, until the latter can be duplicated. Other reports say she will run in connection with the American line.

W. Shanly, C.E., has been appointed sole arbitrator to determine the amount of compensation to which Ryan & Haney are entitled for extras on their Soo Canal contract. Work upon section 12 of the Soulages Canal has been suspended for some time. This is the section under contract to Hogan & McDonald, being mostly rock-work. There is said to be no reason why it should not be proceeded with continuously throughout the winter. The

Minister of Railways & Canals has notified the contractors to the effect that unless work be resumed at once & carried on to the satisfaction of the department, the contract will be cancelled & the work re-let.

At the annual meeting of the Great Northern Transit Co., at Collingwood, Jan. 17, the following officers were elected:—J. J. Long, President; C. Cameron, Vice-President & General Manager; T. Long, Secretary-Treasurer. The annual report showed the Co. to be in a good condition, & it was decided to make special efforts during the coming season to make the service in every way satisfactory & complete. It was decided to build a modern steamer for the Sault Ste. Marie route to replace the Pacific, which was recently destroyed by fire, & to purchase a steamer for the North Shore route, to replace the Northern Belle, also destroyed during the past season.

The Marine Record, Cleveland, Ohio, says: "In writing or speaking of the shipbuilding industry of the lakes we are always alert to the fact that Canada has a large frontage on all of those waterways, except Lake Michigan. In making up statistics of lake shipbuilding, it is, therefore, hardly equitable, not to say generous, to swell the list of U.S. work by including the vessels under construction at Canadian shipyards, a feature which the Record always makes clear when dealing with the subject. It is frequently by such careless, or rather slovenly work, that wrong impressions are created & otherwise carefully gathered statistics made misleading, not unfrequently to the embarrassment of those who may cursorily glance them over."

A general description of the gunboat which is to replace the U.S.S. Michigan on the great lakes, & for which provision was made in the last naval appropriation bill, has been given out. She will be known as gunboat no. 16, & will be a practical duplicate of the Marietta. She will, of course, be constructed at one of the ship yards on the great lakes. She will be 174 ft. on the load water line, 34 ft. beam, 12 ft. mean draught, 1,000 tons displacement, 14 knots speed, 1,200 horse power & 200 tons coal bunker capacity. She will have twin screws, driven by 2 sets of triple expansion engines, making 200 revolutions a minute. Steam will be supplied by water tube boilers at a pressure of 200 lbs. The armament will consist of six 4-inch rapid-fire rifles, four 6-pounders, two 1-pounders & one Colt.—Marine Review.

The storms during the season of 1898 were unusually severe on lake vessels, the losses having been materially greater than during any other season. The losses from various causes have been estimated at from \$2,500,000 to \$3,000,000. In a list of 569 vessels, the causes assigned were as follows: Ashore, 123; aground, in protected channels, 126; fire, 40; collisions, 90; ice, 16; storm-beaten, 96; foundered, 8; miscellaneous, 116. Lake Michigan has been the scene of the greatest number of serious losses, with Lake Superior second. Lake Huron was remarkably free from disasters, & Lake Erie did not contribute its usual quota. Lake Ontario produced a larger number of serious losses than Lake Erie, notwithstanding the limited traffic on the former. The number of boats which have passed out of existence is 58, with an aggregate tonnage of 29,194.

The report of the freight & passenger traffic to & from Lake Superior for the season of 1898 has been issued. The U.S. canal was opened to commerce from Apr. 21 to Dec. 10, 1897 (234 days); in 1898 it was open from Apr. 18 to Dec. 14 (241 days). The Canadian canal was open to commerce from Apr. 21 to Dec. 14, 1897 (238 days); in 1898 it was open from Apr. 11 to Dec. 9 (243 days). Commerce passed through canals 248 days during 1897;

commerce passed through canals 248 days during 1898. The report for 1898 shows a large increase in traffic, as compared with 1897. The number of vessels passing through the Canadian & U.S. canals increased 3%, & the number of lockages increased 11%. The registered tonnage shows an increase of 6%, while the freight tonnage was 12% greater than in 1897. An increase of 8% in the number of passengers is noted.

The Suez Canal carries much of the commerce of a hemisphere, much, indeed, of the exchangeable products of the world. The Sault Ste. Marie canals carry so much of the business of the Northwest as does not go by rail. The Suez Canal is open the year round; the "Soo" canals about 8 months. The latter closed for the year 1898, Dec. 14, having been open 241 days, as against 365 for the Suez. The volume of commerce via the "Soo" was 21,234,664 tons; that of the Suez for the year about 9,000,000 tons. In carrying the business by the "Soo" route, 17,761 vessels were employed, an increase of 3%, to be improved on next year, according to the shipbuilding programme under contract at this time. The value of the commerce moved through the "Soo" the past season is placed at \$220,000,000. This business paid to ship-owners about \$15,000,000. The value of the vessels engaged is placed at \$46,000,000.—Marine Record.

There has been expended on Canada's canal system from the Great Lakes to the Atlantic seaboard a total of \$60,000,000. On the Farran's Point Canal, to avoid the Farran's Point rapid, the enlargement consists in the building of entrance piers, a lift lock 800 ft. long by 40 ft. wide, & the straightening & enlarging of the prism. The Rapide Plat Canal has been enlarged at a cost of \$1,600,000. On the Iroquois section of the Galops Canal there have been provided new crib entrance piers, a new lock 800 ft. long by 45 ft. wide, the cutting of a new prism, & deepening & cutting at the west end, all of which will cost in the neighborhood of \$790,000. On the Cardinal section of the Galops Canal a new cut has been made through the Village of Cardinal. The deepening of the Lachine Canal between St. Gabriel & Lachine to a depth of 16 ft. is practically completed. In Lake St. Louis a channel has been cut 300 ft. wide & 27 ft. deep for a distance of 4 miles.

### Province of Quebec.

The Quebec Chronicle contends that the St. Lawrence is navigable to that city all the year round.

L. Coste, Chief Engineer of Dominion Public Works, is visiting European ports, to gather ideas for the improvement of Montreal harbor.

It is proposed to organize a company at St. John's, to build a steamer of a speed of 15 miles an hour & a capacity for 450 passengers, as an excursion boat on the Richelieu river.

G. N. Ducharme, banker, St. Cunegonde, Montreal, & others, are applying for incorporation under the Dominion Companies Act as the Lake Labelle Navigation Co.; capital \$10,000; head office Montreal.

Capt. A. Bowie, the well-known Ottawa River captain, died Dec. 30, of pneumonia. He was a shareholder in the Ottawa River Navigation Co., & had been 40 years on the river as captain, having been placed in charge of the old Phoenix when he was but 22 years old.

Suit has been entered by the Turret Steamship Co., Newcastle-on-Tyne, against W. G. Jenks, Port Huron; M. Madden, Saginaw; W. E. Donnelly, Saginaw; Mrs. J. Schinon, New Baltimore; and the Manhattan Steam-