

The schooner *Peruvian*, which sunk near Foresters' Park, while trying to make Deseronto harbor, with a cargo of iron ore, is a menace to navigation in that part of the bay, & will be raised.

The Government dredge & scows, which have just finished working on the improvements at Kingston, will winter at the Government dry dock. They will undergo repairs during the winter.

The car ferry *Shenango* is having considerable difficulty in making Port Stanley. The Captain says the water is shallow, but the L. E. & D. R. people say there is 1½ ft. more than she draws.

The Hamilton Harbor Committee has forwarded to Ottawa petitions from lake captains, vessel-owners, & local yachtsmen, asking for a range light on the west end of the south pier on the bay side of the Beach canal.

The harbor improvement work at Port Burwell, for which provision has been made in the estimates, will, it is said, be immediately commenced under the supervision of Mr. Teel, engineer of the T. H. & B. Ry. construction work.

The str. *Edna Brydges*, plying on Lake of the Woods & Rainy River, between Rat Portage & Fort Frances, encountered thick ice in the Falcon Rapids on her last down trip of the season. A hole was made in her bow & she was beached just in time to prevent her sinking.

The barge *Toronto*, carrying 18,200 bus. of wheat, was cut through by ice in the Lachine Canal, Nov. 29, & about 4,000 bus. of her cargo damaged. She did not sink, & the balance of the cargo was unloaded in good condition. She was on her way from Fort William to Montreal.

The wreckers have abandoned the schooner *Hector*, ashore near Wellington. The schooner *Kildonan*, which went on at the same time, has been released & was towed to Kingston. The wreckers were driven away from the *Hector* by bad weather. She is valued at \$8,000 & is not insured.

The schooner *Sephie*, which has been tied up at Sarnia for the winter, carried 18 cargoes of lumber to Point Edward, & took up 2 cargoes of supplies from Sarnia to French River. This is a greater number of cargoes than any one sailing vessel has ever carried from Georgian Bay to Sarnia or Point Edward in the history of these places, & sailing both ways. The *Sephie* is owned by the Ontario Lumber Co.

About 3 years ago the steamer *Fairbank* was almost destroyed by fire at Port Colborne. Since then she has been idle, no material repairs having been made to her. She has been bought by Captain Strong, of the tow barge *Calhoun*, & towed to Tonawanda Creek. During the winter she will be rebuilt, & put into commission at the opening of navigation next season. It is estimated that it will cost about \$6,000 to make her fit for service again.

The handsome steam launch *Wanda*, the property of the T. Eaton Co., recently built by the Polson Iron Co., is being enlarged & remodelled, & 15 ft. added to her length. Her speed will be increased to 17 miles an hour. A number of apartments will also be added, & when finished she will be one of the prettiest yachts afloat on Muskoka Lakes. She is being repaired at her moorings in Gravenhurst, where she will winter.

At a meeting of the Executive Committee of the Lake Carriers' Association with a number of vessel owners not members of the organization, held in Cleveland, Ohio, Dec. 13, a resolution was adopted providing that navigation should not open before April 25 next year. In order to bring about what is desired, it was decided to solicit the aid of the grain

underwriters. The object is to prevent the usual early rush of boats for cargoes & the subsequent demoralization of rates.

A number of freight & passenger steamers doing business on the Lake of the Woods & up the Rainy River as far as Fort Frances, make their headquarters at Rat Portage & take considerable business to the town. This year has witnessed a great increase in the popularity of the run to Fort Frances as a pleasure trip, & the twin-screw steamer *Keenora*, which makes tri-weekly trips to that point, is said to have secured considerable revenue from this source.

The big steel propellers *Rosedale* & *Algonquin*, which generally winter at Toronto, have secured new berths at an outside port for the coming winter. Both vessels have been engaged in conveying grain & general merchandise between Fort William & Prescott during the past season. Both belong to Toronto, & would have wintered there had not the Cuba, Persia & Ocean of the Merchants' Line been tied up at Geddes Wharf. There is no other suitable place for shelter along the water front, so the owners decided to tie them up in Owen Sound Harbor, where they will undergo a renovating for next season's work.

As usual the last cargoes of the season carried westward were enormous. The large C. P. R. liner *Manitoba* cleared from Owen Sound for Port Arthur with a record cargo. She carried in all 1,548 tons of freight, equal to 118 car loads. In all 129 cars were awaiting shipment, but 11 of them had to go direct to their destination. The cargo included 22 straight cars of sugar, 3 cars of whiskey, 6 cars of iron pipe, 5 cars of salt & 82 cars of miscellaneous merchandise. The *Owen Sound Times* says: "When the steamer left the dock she was weighted down an inch or more below the water line, & was drawing 15 ft. of water aft & 12½ ft. forward."

The Winnipeg Produce Exchange was anxious that the Minister of Public Works should keep Fort William harbor free of ice to the latest possible date this fall, owing to large quantities of wheat which were late in moving. Mr. Tarte did not give the grain men much encouragement. His reply was as follows:—"We cannot do anything to keep the Fort William harbor free of ice during the winter. Nature is stronger than man, & as we have no proper equipment either for Fort William or other harbors, we have to let things follow their natural course. We would like very much in Montreal to have a few days' more navigation, but we can't get them."

The storms that have swept over the lakes this season have been the most disastrous for shipping in the history of navigation. A cursory estimate places the total losses to underwriters & vessel-owners on the lakes for the season of 1898 at \$2,500,000, & gives it first place for losses in the history of lake navigation. The year 1895 had hitherto held the record with a total loss of \$2,097,000. It still stands as the closest rival with the memorable season just brought to a close. On an average the boats lost have been more important & larger than usual. There have been almost 100 accidents during the last 2 months. A great deal of freight has been recovered from some of the sunken vessels, while others are a complete loss. The storms of Oct. & Nov. made this an extraordinary year. Lake Superior has had a share of the wrecks, with the Straits of Mackinac & narrow passages of the north to increase the totals. Three steamers went down with a loss of \$375,000. Only one mishap occurred on Lake Ontario during the past season, but several vessels have been wrecked. The accident occurred to the schooner *St. Peter*, which, laden with a big cargo, bound for Duluth, went down with all on board, including the captain's wife.

Charting the Great Lakes.

The Hydrographic Survey in connection with the Marine Department has lately settled down in winter quarters at Ottawa, & the staff are busily engaged placing on charts the information gathered during the season. The survey this season was extended along the south shores of Cockburn & Grand Manitoulin Islands, from the southern entrance to False Detour Channel to near the entrance to Georgian Bay, a distance of 80 miles. Soundings were carried on in boats to an average distance of 1½ miles off the shores at intervals of about 175 yards, or to a safe distance outside the shoal water. Outside of this soundings were taken in the deep water from the deck of the steamer *Bayfield* to an average distance of 11 miles from shore. For this work the 2 boats were rowed by 4 men in each, 1,180 miles, & the ship steamed 950 miles. A great deal of care was taken over the examination of the dangerous magnetic reefs lying 2½ miles off the southeast point of Cockburn Island, & immediately in the entrance to Mississauga Strait. Much time & labor were also spent in carefully sounding out the various channels through the Duck Islands & the extensive area of shoal water projecting from the south end of the group. No doubt the correct marking of these dangers will prove a great boon to those compelled to navigate these hitherto unsurveyed waters. Really good harbors are scarce along the south side of the Grand Manitoulin Island, there being not one from the Ducks to South Bay, a distance of 50 miles. The latitude & longitude of a point on the Ducks, & also the magnetic variation of several places along the shore were carefully ascertained.

Before beginning the regular survey work on Lake Huron a careful inspection was made of the approach to Depot Harbor, Parry Sound, to ascertain if the channel were suitable for the deep-draught boats that were expected there. This channel is now so carefully buoyed & lighted by range lights & well-placed gas buoys that no accident occurred during the season. The steamer *Bayfield* was placed in commission April 23, & the crew was paid off on Oct. 25. During that time she had on board 3 surveying officers, a sailingmaster, 2 engineers & a crew of 17. The season was not a good one for surveying, there being fresh breezes nearly always on shore, making work in the boats & landing on a low flat shore, strewn with boulders, very dangerous. This last season has been the first for hydrographic work on Lake Huron, & it is hoped that before the opening of navigation in 1900 the first sheet chart will be issued, embracing all the shore line & water from the mouth of St. Mary's River to the Ducks. A second chart of the south shore of Grand Manitoulin Island will be issued later.

The hydrographic survey of the Canadian shore of Lake Erie was completed in 1897, & has been partially published by the British Admiralty, which lately issued two coast charts of the Canadian shore from Buffalo to Port Burwell, including Long Point & Port Dover. A new edition of the sailing directions for Georgian Bay is being prepared by the hydrographic staff, & will shortly be issued, embodying in it all the latest information.

Canada's Merchant Marine.

A supplement to the 13th annual report of the Department of Marine, just issued, shows that the total number of vessels remaining on the register books of the Dominion on Dec. 31, 1897, including old & new vessels, sailing vessels, steamers & barges, was 6,684, measuring 731,754 tons register tonnage, being a decrease of 595 vessels & a decrease of 57,545 tons register, as compared with 1896. The number of steamers on the registry