Jacques Cartier, it should be blown up with dynamite whenever required during the winter. When the Jacques Cartier would have finished her work between Quebec and Montreal she would proceed to the Saguenay, & open that river to navigation. Under present circumstances it is the second or third week in May before vessels can go up the Saguenay river. During the summer the Jacques Cartier should be stationed at Sydney—or some other most convenient port—and be ready to proceed at a moment's notice to the relief of any stranded vessel in the Straits of Belle Isle, on the coast of Anticosti, or elsewhere. I need only allude to the wreck of that fine steamer the Scotsman last season, to prove the advantage of having our Jacques Cartier always on hand in case of emergency. How useful she would also be in assisting vessels late in the autumn, when a rather too early formation of ice on the St. Lawrence threatens to lock up some vessels all winter. On one occasion the Ermack rescued 9 ice-bound steamers outside the port of Reval - and she has convoyed safely about 100 steamers into ice-bound ports. Our Jacques Cartier would seldom have to cut through ice more than 24 ins. thick on the St. Lawrence. I hope this important matter will be taken up seriously by the shipping & insurance interests, & especially by our representatives in Parliament & the Government of Canada. We cannot hope for uninterrupted winter navigation of the St. Lawrence, but we can save at least a month by having our Jacques Cartier built & at work as soon as possible.

Toronto Harbor Improvements.

J. R. Roy, C.E., representing the Dominion Department of Public Works, & W. T. Jennings, C.E., representing the City of Toronto, have presented a report on the improvements they consider necessary to Toronto harbor. In studying the harbor, they have taken into examination the following features: The city of Toronto; the harbor proper; the marsh, & Ashbridge's Bay; the formation, condition, & present requirements of Toronto harbor; the abatement of detrimental features, such as the discharge into the harbor of dirt & sewage from the city sewers; the useful employment of material to be moved from the harbor; the diversion of the Don, & the useful employment of solid matter brought down to it during periods of floods; the entrances into the harbor, & Ashbridge's channel; the protection & the improvement of the peninsula by the use of groynes.

The report states that the sewage of nearly the entire city is discharged into the harbor, together with a great quantity of solid matter from the streets & drains. This condition is characterized as intolerable, & the experts advise that trunk sewers be constructed, & the objectionable matter entirely deflected from the harbor.

The harbor is described as containing an area of 3 square miles; 60% of this area is over 14 ft. deep. Deposits are to be removed from various points, as along the city front, between Queen's wharf & Bay St.; outside the new windmill line, requiring the removal of 292,000 cub. yds. of sand & silt; east 48.75 acres is to be removed, containing 359,000 cub. yds.; between the new windmill line & the present dock line, 29.40 acres, containing 178,000 cub. yds.; the channel from Gooderham's wharf, eastward, from the right bank of the Don, is filled with silt, & this must be either cleared out, & separated from the proposed new course for the Don, at the G.T.R. bridge, or it should be filled up.

The city slips & private wharf berths are nearly all too shallow to permit of access of vessels of full canal capacity. From a comparison of depth records the engineers show that the slips are gradually filling up. From 1889 to 1899, a deposit of 172,000 cub. yds. of silt has drifted into the Don. The total cost of dredging the harbor, since 1880, has been $108,221, an average of $5,411 a year. To improve the present conditions they recommend: That the Don be diverted into the marsh area; that immediate steps be taken for the disposal of the sewage outside the harbor; that silt be stopped from entering the harbor by the completion of entrance jetties; that the deposit be removed from the city's side to a depth of 16 ft.; that Ashbridge's channel be enlarged to its junction with the proposed new course of the Don.

Dealing with the requirements of the harbor entrances, they recommend that the jetties of the eastern entrance be extended 1,000 ft. southward; that the extremity of the entrance should be enlarged to, at least, 750 ft., & that cribs be sunk to a depth that would permit of a 20-ft. channel, if at any time necessary. This extension will prevent the silting up of the channel. To secure Queen's wharf channel and further define it an addition of 200 ft. is recommended to outer pier. That the Eastern channel be dredged to a depth of 16 ft., & the Western one to the present elevation of its solid rock bottom, also that rocks be removed from the lake approach to the latter. Owing to the deepening of the Great Lakes canal system to 14 ft., terminating at Montreal, it is advisable that all improvements made in the harbor & entrances should be of such a character as to enable vessels of, at least, that draught to berth at any wharf within the harbor; also that a later improvement to 20 ft. be kept in view when designing entrance works.

Recommendations are made for the protection of the Island Beach by groynes. For the employment of the material to be removed from the harbor, the engineers recommend that four blocks of land be filled in. The boundaries are as follows: Block A, 25 acres, bounded on the north by Don channel, east by Cherry St., south by Ashbridge's channel, west in the eastern limit of the harbor, giving 3,500 ft. of wharfage. Block B, 12 acres, to south of Ashbridge's channel, & fronting on harbor. Block C, 62½ acres, on west side of marsh in harbor, extending south from block B to Island breakwater. Block D, 330 acres, to fill the marsh area up to a useful level. All these blocks will entail considerable sheet piling & crib work.

The report refers to the deterioration of the harbor by reason of the deposits from the Don, & to prevent further filling up it is recommended: That the old channel of the Don be separated from the new one by sheet piling at the westerly line of the new channel, south of the G.T.R. bridge. But this old channel will still be retained as a portion of the harbor if desired, or if not, it can be filled in at a reasonable cost. A new channel of a width of 125 ft., & a depth of 14 ft. below low water, is recommended to be extended southerly, & in line with the improved channel between King St. & the G. T.R. bridge; across Ashbridge's Bay channel from the harbor, thence almost to the Island bar, a distance of 4,800 ft.

The estimated cost of all the dredging & crib work required in carrying out these recommendations is as follows:

Dredging harbor	$140,000
Eastern entrance	256,000
Western entrance	21,000
Ashbridge and Don channel improvement	100,000
Don works	80,000
Placing groynes	150,000
Making areas of land	447,787

Decay of the Buffalo-New York Route.

A Buffalo, N.Y., correspondent writes.—A year ago the business men of New York commenced to realize that the export grain & provision trade at that port was permanently declining at a rapid rate, & that other U.S. ports on the Atlantic seaboard & Gulf of Mexico were cutting in. At first the cause of the divergence of the trade was generally stated to be due to the decadence of the Erie Canal. Last spring an investigation was made, & it was discovered that the most prominent shippers in Chicago of grain & provisions were securing better rates to Boston & Montreal than to the other seaports. This discovery put a wet blanket upon the agitation in New York for the enlargement of the Erie Canal, inasmuch as the fact was established that trade is being so distributed that New York can no longer expect to be the controlling port.

A few weeks ago the business men of this city commenced to realize that the Buffalo route has ceased to control the grain transportation trade. The trade is being diverted to Erie & Fairport on Lake Erie, to the Georgian Bay, & to Montreal. There are about 50 elevators at this harbor, but the amount of grain being handled now is not much more than that which is going to the Georgian Bay ports. There is certainty rather than fear that the decline of the grain trade at this port is permanent, for the strongest competition is by U.S. routes. The result is that interest in Buffalo in the enlargement of the Erie Canal has gone by the board. One feature of the situation that is giving serious discussion is that there is so little grain arriving at this port that few canal boats can get cargoes, although willing to take them at the low price going. There is plenty of westbound package freight offered canal boats at New York at high rates, but not high enough to be profitable if the boats have to go east without cargo.

Up to this year there was no questioning the idea that the most advantageous route for western grain & produce to the seaboard was that by way of Buffalo, which permits the longest distance of carriage by deep-draft vessels, with transfer to canal or minimum of grade railroad. But the one disadvantage of this route lies at New York harbor, where the unprogressive facilities for transfer to ocean vessels have developed into a burdensome expense. Other seaports, such as Boston & Newport News, have not this disadvantage, & thus it has become possible to shorten somewhat the distance of the lake carriage in deep-draft vessels, & transfer the grain at Erie & Fairport. Competition in transportation, which was never greater, supplied a reason for the grain trade being so promptly diverted from the Buffalo route.

Next in popularity at present is the Georgian Bay route, permitting short distance carriage of grain in deep draft vessels, with long haul by rail. Bidders for business by this route have as their greatest advantage their combination of enterprise & determination. That method is proving increasingly successful. When it is so extended that the route will be equipped with a chain of mammoth elevators from the grain fields to the threshold of the British market, business will be established upon too strong a foundation to be displaced for many years. Reports from Chicago this season are that cargoes of grain are being secured for the Georgian Bay route much more readily than for the other routes.

Although the St. Lawrence route, permitting the maximum distance of carriage by deep-draft vessels in competition with a deep artificial waterway to the seaboard, opened up for business at the beginning of this season, there is no radical increase as yet in shipments by that route. It is evident that the completion of the projected terminal facilities is essential to the securing of the great volume of business that is promised for that route. These facilities will doubtless be available at the opening of next season.

Considering the previous history of these three established routes, it is more surprising