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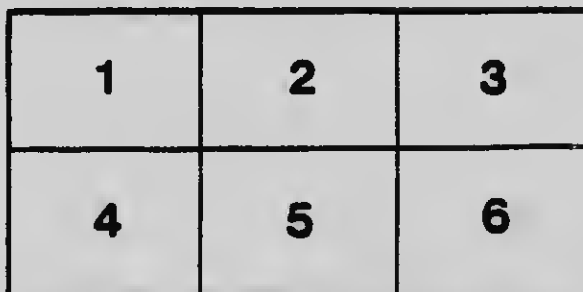
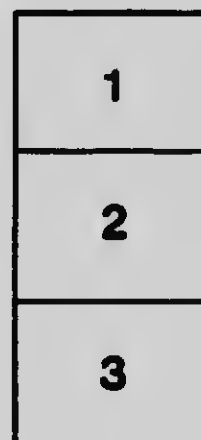
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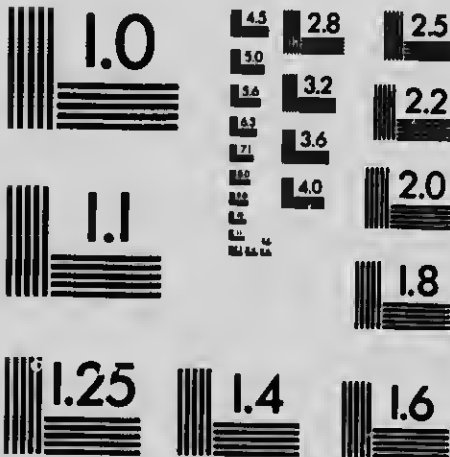
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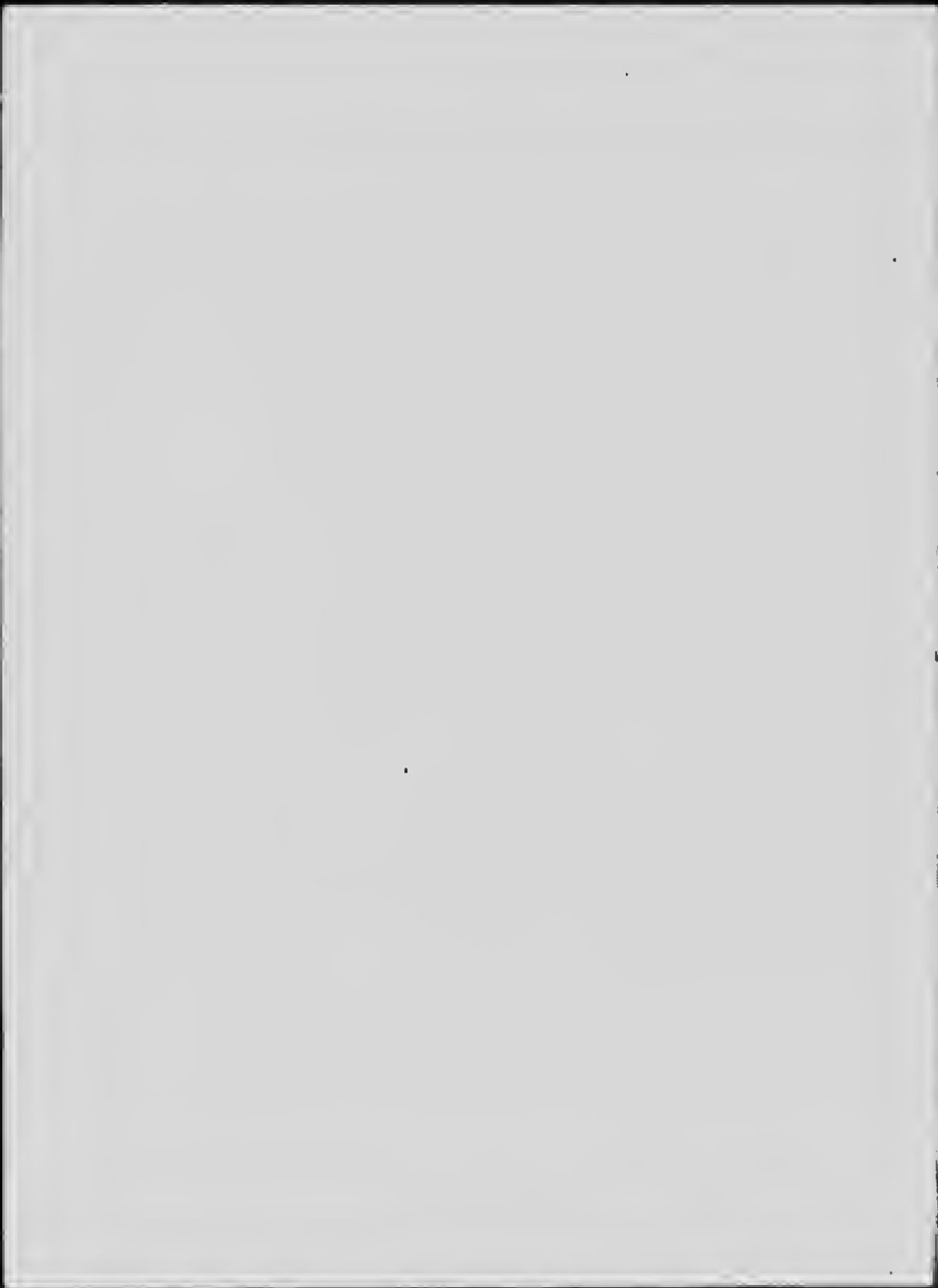
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The St. Lawrence Route Its Past and Future

*Canada's Natural Waterway from the Rockies
to the Sea.*



*Being a Paper read by THOS. CONLON, Esq., member of
the Dominion Marine Association, before the
Thorold Board of Trade,
May 11, 1909.*

*Published jointly by the THOROLD and ST. CATHARINES
Boards of Trade.*

1909

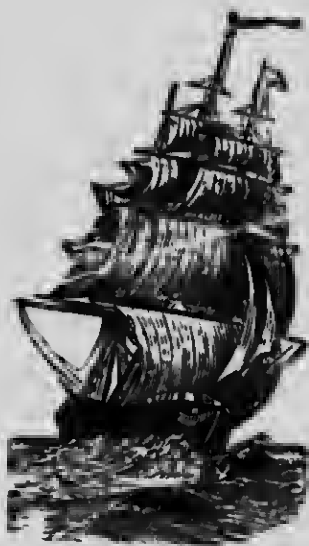


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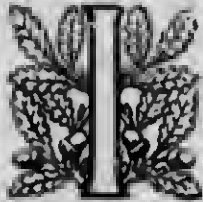
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The St. Lawrence Route

Its Past and Future



IN the Odd Fellows' Hall, Thorold, under the auspices of the Thorold Board of Trade, on Tuesday evening, May 11, 1909, Mr. Thomas Conlon of St. Catharines, a well-known marine man, and a member of the Dominion Marine Association, delivered a most interesting and instructive address on the advantages of the St. Lawrence and Welland Canal route over the Georgian Bay route; and also gave a detailed account of the improvements on the Welland Canal during the past sixty years. His address was much appreciated by all who heard him. President John Stuart occupied the chair, and referred in his address at the opening of the meeting to Mr. Conlon's extensive experience on the Welland Canal.

Ex-President Leslie McMann, stated that he, as President of the Board of Trade, had asked Mr. Conlon to give an address on the canal route, and he had kindly consented. The question is one of the most important before the people, having to do with better water transportation throughout the entire Dominion of Canada. With the improvements now proposed, American competition need

not be feared. He was proud that the Thorold Board of Trade had such a member as Mr. Conlon. Mr. Conlon's vessel was the first that ever entered Port Arthur harbor. He is one of the pioneer marine men, and a better man to handle the question could not be secured.

Mr. Conlon was then introduced, and proceeded with his address, which was as follows :

When I was asked a couple of weeks ago by our Board of Trade if I would give an address on the history of the Welland Canal, and after thinking it over gave my consent, my idea was to furnish a little entertainment that would not probably be heard of outside the town of Thorold, or at all events would be confined to people in this immediate district, who are interested in the Welland Canal only. However, within the past few days an influential delegation from the northern part of the country has visited Ottawa, and strongly urged upon the Government the great necessity of building the Georgian Bay Canal from French River to Montreal. These gentlemen had a perfect right, as citizens, to urge their views upon the Government, but they had no right to speak for the marine interests of the country, as I understand they did. The Dominion Marine Association is the best authority in this country on marine matters, in my opinion, and apparently their assistance was not asked for ; but the deputation was limited to men who favored the Georgian Bay Canal. Because of the action of this deputation, I concluded, as a

member of the Dominion Marine Association, to widen the scope of my talk tonight, and to commit to manuscript.

The transportation question is, perhaps, the most important we have to deal with in our country. The Government has aided railways to the extent of \$30,000,000, and the provinces and local municipalities have given as much more. The Government has also spent \$120,000,000 on canals, and perhaps another \$100,000,000 for deepening channels and harbors, building breakwaters and lighthouses, and providing other aids to navigation. And they are not done yet, as the cheapening of the transportation of products of the country, its fields, its forests, its fisheries, its mines and its factories, from the place of production to the markets (chiefly in England), in competition with other countries, means, to a large extent, our success or our failure.

Therefore our Governments, our merchants and our public men are devoting all their energies to cheapening transportation. Most of them, however, devote all their time and energy to the railways, and very little to our inland waterways. This may be accounted for by the fact that comparatively few people, our legislators included, seem to realize the vast importance and the future possibilities of our great inland waterways, so important in cheapening transportation to less than half the cost of railways.

I will, therefore, confine my little talk to you to our waterways, and chiefly to the St. Lawrence

route. I will endeavor to show some of the improvements made in it during my sixty years on the Welland Canal. During that period I have seen Montreal harbor grow from a 500-ton vessel size to that of a 15,000-ton steamship, carrying off our products to England. Fifty-eight years ago I saw the first vessel going through our present old canal, carrying 600 tons; I saw the canal enlarged in 1881, 28 years ago, to what is now called our New Canal, with vessels carrying 2,400 tons; and I hope to live to see it further enlarged to accommodate a ship carrying 15,000 tons.

Twenty-five years ago the "Soo" had neither telegraph nor railway, and if a vessel happened to freeze in there for the winter it was as much as the crew's life was worth to attempt to get out to civilization. Now there are 50,000,000 tons of freight passing through that channel yearly.

A quarter of a century ago Port Arthur was no larger than Thorold; now Port Arthur and Fort William have a population of 25,000, a dozen elevators holding 18,000,000 bushels of grain and sending out 60,000,000 bushels a year in about seventy-five Canadian steel ships, which would carry away, if they all went at once, about 6,000,000 bushels each trip. Most of you are aware that my brother and I built the little steamer *Erin* at St. Catharines in 1881, and ran her constantly until a couple of years ago, when she was run into on the River St. Clair and sunk with five of her crew. The *Erin*, under Captain Jerry Clifford, was, I believe,

the first steamer to load grain at Port Arthur—in 1882. The grain was loaded from wagons into the vessels; and the next year, 1883, under Capt. Patrick Sullivan, the *Erin* was the first vessel to load grain at the first elevator at Port Arthur. Captain Sullivan is still on the lakes, commanding one of Mr. Calvin's boats, and I am quite sure you will all unite with me in the hope that he will take the first ship through the next new canal, about seven years hence (Hear, hear!)

These are some of the improvements within my sixty years on this canal, and perhaps many of you will be pleased to note the great changes and improvements in our inland waterways in half a century. It is some pleasure to recall them to the minds of our Board of Trade, with a view to shewing the possibilities and the probabilities of the St. Lawrence route within the next half century, and to advise the Government to make the fourth Welland Canal big enough.

The St. Lawrence Route

Commences at the Atlantic Ocean, coming up the gulf and river to Montreal, a distance of about one thousand miles, thence up the six canals to Prescott, and through Lake Ontario and the Welland Canal to Port Colborne, about 365 miles additional, or in all over 1,300 miles from Port Colborne to the Atlantic. This is what is known as "The St. Lawrence Route." The seven canals, including the Welland, have 46 locks in a distance of about

seventy-three miles, the balance of the 1,360 miles being lake and river navigation.

Less than sixty years ago Montreal commenced active operations to make that an ocean port. They realized their geographical and economical position on the great ocean highway—behind them a great waterway of 1,400 miles to the head of Lake Superior, and before them 2,800 miles of ocean to Liverpool. It was a large undertaking, but they commenced it about 1850, and it is only now that they are beginning to reap the benefits of their labor. Of the 1,000 miles between Montreal and the gulf, about 100 miles had to be deepened, chiefly between Montreal and Quebec, where the river widens and is called Lake St. Peter. At this point there was a depth of only ten feet of water. About twenty years ago they had succeeded in dredging a channel through, 27½ feet deep and 200 feet wide, from Montreal to the gulf. But there was much to do yet, and the burden was too heavy for the city of Montreal, which had borne the expense and was \$3,000,000 in debt on that account. The Government, consequently, realizing the vast importance of the St. Lawrence route and its tributaries, assumed the debt, threw the waterway open to the world, and vigorously continued improving the whole St. Lawrence route, that we might successfully compete with our American neighbors for the carrying trade, by water, of not only our own country but as well a large part of the United States, which sent their products to New York by way of the Erie Canal.

The Early and Late Canals

The old lower canals were completed, I think, in the sixties. The locks were 180 feet long by 9 feet deep. The largest boat accommodated carried about 1,000 tons. These canals were enlarged to the same size as our present Welland Canal, and completed about 1891 (about ten years after the Welland). The 25 locks on the Welland and the 21 on the lower canals permit the passage of vessels 260 feet long, 45 feet wide, drawing 14 feet of water, and carrying 2,400 tons, or 80,000 bushels of wheat.

The first Welland Canal was completed in 1829 by the late Hon. Wm. Hamilton Merritt of St. Catharines. It only followed the present route south to Port Robinson, thence 9 miles by the Chippawa River to Chippawa, entering the Niagara River 3 miles above the Falls, from which place the boats were towed by horses or oxen to Fort Erie. I see a Niagara Falls engineer is now asking the Government to consider the old route again, but I hardly think that vesselmen will favor the scheme past Chippawa. The first canal was taken over by the Government, enlarged and completed in 1851 to accommodate a vessel carrying 600 tons and of 10 feet draught. The channel was then changed to Port Colborne, and was fed from Lake Erie instead of from the Grand River.

The present new canal was begun in 1871 and completed in 1881, and present conditions show that the engineers in charge were behind the age,

both in construction and in estimating the future possibilities of the St. Lawrence route. The locks were only 12 feet deep, and had to be immediately increased to 14. Twenty-five locks were constructed where half that number would have been sufficient. The bridges were located and swung in the middle of the channel, as if they were intended either to be knocked down or to sink the vessels passing through. No place was provided, in the whole 27 miles, where a vessel could turn around. The apparatus for filling the locks and opening and shutting the gates was obsolete, slow and cumbersome. The depth of the aqueduct at Welland and the locks at Port Colborne, by some bungle of the engineer, was made too shallow, and had to be afterwards deepened, as well as the whole long level from Port Colborne to Thorold. All these mistakes had to be rectified by the present Superintending Engineer, Mr. J. L. Weller, who now has the canal in fairly good shape for its capacity. I right here want to say, as a vesselman, that vesselmens and all others having business on the Welland Canal are well pleased with his management; he is a competent engineer, and is always ready and willing to give assistance and advice to the vesselmens when requiring it. And the canal is fortunate in having him here.

Fourteen-Foot Canals to Montreal

We have now come to 1891, when all the St. Lawrence canals, from Port Colborne to Montreal,

were completed for 14-foot navigation, and the ship channel below Montreal made $27\frac{1}{2}$ feet deep. Manitoba grain was coming down to Port Arthur, and the time had arrived when Canadian vesselmen were looking for better times on the St. Lawrence. But they were destined to be sadly disappointed for twelve years more, or until 1903, for it was only within the last five years, or in fact only last year, that the St. Lawrence clearly proved itself capable of competing in carrying produce from the head of Lake Superior to the seaboard. Its chief competitors were the Erie Canal and the railways from Buffalo to New York, besides the present Georgian Bay route, which is part water and part railway. I refer to the Canada Atlantic.

Delay at Montreal

Although the Manitoba grain kept coming to Fort William in increasing quantities, Canadian vessels received little benefit therefrom, as the American vessels took from 75% to 90% of it to Buffalo, and Canadian vesselmen and the general public looked on with amazement, and asked the question: "Was it to feed American vessels and the Erie Canal that we spent \$10,000,000 in developing Manitoba?" That grain was going to England by way of Buffalo and New York instead of by our St. Lawrence route, and Canadian vessels were disappearing from the lakes. The main cause of our depression was the slow progress of improvements in Montreal; they had no storehouses to

receive grain, and our vessels had sometimes to wait several days for an ocean steamer to arrive to unload them ; and when a spurt of three or four million bushels came down they could not handle it. Navigation was delayed for lack of storage facilities, and consequently the grain had to go to Buffalo instead of through Canadian channels, and Canadian vessels continued to suffer.

Logs Go To Michigan

Another handicap at that time, equally as bad, perhaps, for our vesselmen, was the taking by Americans of our logs from the Georgian Bay to Michigan between 1890 and 1896, 300,000,000 feet of logs being towed away yearly while our vessels, our saw-mills and our towns on the Georgian Bay could only coolly look on as the benefits of our lumbering industry passed over to the Americans, along with the wheat from Manitoba. These logs, if sawed here, would have kept going a fleet of 60 of our old canal vessels. But when the logs were towed away our Canadian vessels lost all opportunity of carrying the lumber product. Consequently we organized the Canadian Lumbermen's Association, and asked the Hardy Government to find some means of preventing our logs from going to Michigan. But the Government did not give us much encouragement at first. Mr. Hardy seemed to think his first duty was to sell his standing timber at a high price, regardless of Canadian mills, vessels and merchants. We had not only the

Government to convince, but we had also to fight two strong sections of our lumbermen's association. The Ottawa lumbermen, who suffered no loss in this way, took little interest in us, and we had, moreover, their active opposition to contend against. Besides that, several of our Canadian loggers, who had no mills, but sold their logs to the Americans, opposed our request. Therefore practically a score of our saw-mill owners had to make the fight at first. But eventually public opinion came strongly to our assistance in demanding that Ontario logs be sawed in Ontario mills. Mr. Bertram, one of the best men that Ontario has produced, was our president, and it was he who worked out the remedy. He told the Government that their own timber regulations enabled them to require that all Ontario crown land logs must be manufactured in this province into lumber. As a result, the Government enacted the manufacturing clause, so that if the Americans now want our logs they **must** have them sawed here. And I am pleased to think that I was one of Mr. Bertram's first lieutenants in the fight, but I can assure you that my bank account has never recovered from the results of the period from 1890 to 1896, for we had not only the troubles I have mentioned, but, as well, the financial panic from 1893 to 1897 to augment our difficulties, the worst in my time to vessel- and lumbermen.

Dominion Marine Association

Now, though the 14-foot navigation had been in operation for a dozen years at a cost \$100,000,000, and the C. P. R. as well at a cost of another \$100,000,000, besides other aids to navigation which cost perhaps \$50,000,000 more, the Americans were still getting the benefit of our expenditures. This was the position of affairs until 1903, when the Kingston marine men took the lead in calling together all the vesselmen from Montreal to Vancouver; they met at Ottawa in 1903, formed the Dominion Marine Association, and had an interview with the Government, stating their grievances, and appealing for a remedy of some kind. The Government assured them that they realized the position, and that they were quite anxious to keep Canadian trade in Canadian channels, but that our coasting laws allowed American vessels to take grain from Fort William to Buffalo, and that as yet the St. Lawrence route was a disappointment, notwithstanding the large expenditures upon it. They asked us to suggest a remedy, and our spokesman asked that the canal tolls be abolished, and also the tonnage tax and a few other minor burdens on Canadian vessels; he also asked that the whole lighthouse system, buoys, fog-horns and other aids to navigation be improved all along the line; and that the harbors, and especially Montreal, and the ship channel to Quebec, be improved; and that more elevators be built. When the vesselmen had

finished stating their case, Mr. Blair, the then Minister of Railways and Canals, replied that he did not think our suggestions would remedy the difficulty—did not think half a cent a bushel sufficient to turn the trade from Buffalo and New York to Montreal, while the treasury could not lose a quarter of a million dollars in canal tolls. Coming from Mr. Blair, this was rather a cold blanket for the vesselmen, who for a time felt discouraged. The Premier however, then came to our aid; he said the loss of tolls was small compared with the keeping of Canadian grain within Canadian channels, and the suggestions of practical vesselmen should be considered. Before leaving Ottawa that day we were convinced that our request would be granted. The Government abolished the tolls for two years as an experiment, and also the tonnage tax, inspection fees, etc., and began to vigorously improve the harbor at Montreal and the ship channel to Quebec. They now have fourteen lines of steamships, 30-foot draught, carrying 15,000 tons each, and 2,000 feet of dockage, which will soon be doubled. Large steel sheds have also been erected, capable of handling 150,000 tons a week, with railway tracks on each side, and freight is being handled direct into the sheds or the vessels at half the former cost. Elevators have been built, and grain can be conveyed to any of a dozen ships. The Government assumed the harbor debt, and took over the ship channel below, thus making the whole St. Lawrence route a Government work.

Three commissioners were appointed to improve the harbor, and were requested to make Montreal one of the best ocean ports in the world. These commissioners are thoroughly competent and practical men, and seem to have the confidence of all concerned. The harbor and ship channel below have been thoroughly lighted, and equipped with buoys, fog-horns and other aids to navigation, thus lessening the risk and cheapening the rates of insurance. Telephone and telegraph lines reach about 200 miles from the Harbor Commissioners' office to aid ships in distress. The cost of improving Montreal harbor and ship channel will probably amount to \$25,000,000, which is cheap compared with New York or European harbors. To get the full benefit of all this expenditure on the whole St. Lawrence route, the Government is justified in spending money freely on the great waterway that will largely regulate the cost of carrying our produce from the Rocky Mountains to Liverpool, a distance of 5,600 miles; a waterway that will protect, to a large extent, the people of this country from the extortion of the railways; a waterway that has even now proved that it is capable of at least competing with the Americans in the water carrying trade, not only of our own North-West, but also the grain trade of several of the American states. The last five years—yes, the last two years—has put new life into the friends of this route, and has convinced Americans as well as Canadians that its geographical position is bound to win out in the end as the cheapest

route from the head of the lakes to England for the products of half a continent. Last season, for the first time, grain was carried from Fort William to Montreal as low as $3\frac{1}{2}$ cents a bushel, while the American route via Buffalo to New York was 7 cents, with the result that Montreal secured nearly all the grain exported to England. The Americans became thoroughly alarmed at losing their trade, and have now lowered the rate from Buffalo to New York to 4 cents, thus making their rate from the head of the lakes to New York about $5\frac{1}{2}$ cents instead of 7 cents, as it was last year. Of course the $3\frac{1}{2}$ cents above mentioned is a starvation rate for Canadian vessels of present size.

In order to insure the future success of the St. Lawrence route, the canals should be shortened; the 46 locks on the seven canals can be reduced to 15; and the depth of the canals should be increased to 30 feet to avoid further enlarging in a lifetime. There is now 20 feet draught from the head of the lakes to Buffalo, and the Americans are talking of increasing it to 26 feet; and, considering the fact that three Welland canals in my time have been considered too small and behind the age, we surely are justified in asking the Government to make the next one large enough to avoid enlarging for a few generations at least. The competition with the Americans will continue; but if we enlarge the St. Lawrence route our geographical and economical position will enable us to successfully compete with all nations for the water carrying trade of

the lakes, including a large share of the American trade as well as our own. We must remember that we will have not only the Erie canal, the Buffalo railways and the Illinois canal, via the Mississippi river, but also the competition of the C. P. R. and G. T. R. in carrying the products of our west to Vancouver. We will also have to compete with the Hudson Bay route, which will mean not only the Government railway, but also the ocean steamers coming via the Nelson River and Lake Winnipeg to load grain at the city of Winnipeg for Liverpool. This may seem visionary to some, but we should remember that our Northwest is likely to become the greatest grain exporting area in the world, and that the St. Lawrence route will have to fight for its share of the grain; and, if so, we should now prepare for it when considering the further enlargement of our canals so that they may compete with other routes.

The Erie Canal

Let us compare the Erie Canal with its competitor, the St. Lawrence route, taking Buffalo and Port Colborne as the starting points; and, the water rates from the head of the lakes to these places being the same, say $1\frac{1}{2}$ c per bushel, and say 4c from Buffalo to New York by rail or Erie Canal, and also 5c from Fort William to Montreal, which appear to be the likely rates as now fixed for the coming season by the railways at Buffalo, and also by the G. T. R. from Georgian Bay points to Montreal, both

competing with Canadian vessels from Fort William to Montreal :

From Buffalo to New York there are 306 miles of canals in the 450 miles as against a distance from Port Colborne to Montreal of 56 miles with only 73 miles of canals. Then, again, the Erie Canal is six feet deep, and the canal-boats carry only 8,000 bushels, while the St. Lawrence Canals are fourteen feet deep and accommodate boats carrying 80,000 bushels. Both canals occupy about the same time in navigation. The present Erie Canal is, therefore, out of the race. A new Erie Canal is now being built, but only for 1,000-ton boats as compared with our present 2,400-ton ships. Therefore, where will the Erie be when we get our 12,000-ton Welland Canal? The railways from Buffalo to New York are, however, vitally interested, and will put up a hard fight against the St. Lawrence route. But when you put grain in a railway car you begin to increase the freight rate enormously, as compared with vessel rates, and the Canadian vessels can carry grain cheaper from Port Colborne to Montreal than the railways or the Erie Canal from Buffalo to New York.

The Proposed Georgian Bay Canal

I have the engineer's report on this proposed canal from the French River on the Georgian Bay to Montreal, 442 miles, with 27 locks 650 feet long, 65 feet wide and 22 feet deep, the cost being one hundred to one hundred and ten million dollars.

The following advantages are claimed for this waterway over the St. Lawrence route :

Distance from Fort William to Montreal, 936 miles instead of 1,216 by the St. Lawrence route, showing a saving of 280 miles of lake navigation and of one to one and a-half days' time in making the trip from Fort William to Montreal. It is also claimed that a 10,000-ton vessel will pass through the 442 miles of canal in 70 hours, or about $6\frac{1}{2}$ miles an hour. These are the leading features of this project, which the Government is apparently now seriously considering. The question is whether to build this canal, or to enlarge the St. Lawrence canals, or at all events the Welland Canal, and perhaps next session of Parliament will decide the question.

I think the Government should give this matter very serious consideration, and that they should secure the views of practical vessel captains and owners as to the length of time required to pass through this canal. From what I know of canal navigation, I think the speed will be nearer two miles an hour than six. It may be considered presumption on my part to make such a bold statement in the face of the engineer's report. I would say, however, that the Government should investigate thoroughly this question of time before committing the country to this enormous expenditure on what may fairly be considered but an experiment. And,

viewing it from a vesselman's standpoint, I think the engineer's report practically kills the scheme.

The present St. Lawrence route has now proved itself capable of holding its own against all present competitors, and for a comparatively moderate sum it can be enlarged to defy competition. Its 73 miles of canal can be shortened, and its present 45 locks can be reduced to 15, if the seven canals be all enlarged, thus reducing the time to Montreal by a day, or say from Fort William to Montreal in six days.

The estimated cost of enlarging the Welland Canal is from \$25,000,000 to \$30,000,000. Its 26½ miles will be reduced to probably 23 in a straight line from Port Colborne to Lake Ontario; its 25 locks will likely be reduced to 7; its depth should be 30 feet; and its locks should be 800 feet long by about 75 feet wide. These dimensions would allow a large ship to make fairly good time in the canal. If this estimate of from 25 to 30 million for the enlarging of the Welland Canal is right, I would think that \$75,000,000 would be a reasonable estimate for the enlargement of the whole system from Port Colborne to Montreal. Now, if these estimates are nearly right for enlarging the St. Lawrence route for all time to come, why should our Government consider seriously the question of building a competing canal of a doubtful character, and at a yearly loss for interest and maintenance of six or seven million dollars, without receiving any tolls from it, as I assume that canal tolls are abolished. I think

it safe to say that its cost would be double the cost of enlarging the whole St. Lawrence route, because the present dimensions, as given in the engineer's report, would have to be considerably enlarged for a ten- or fifteen-thousand-ton ship in order to give it safe navigation.

The engineer's report says that, comparing it with the St. Lawrence route, there is a saving of 282 miles (one day's lake running), and a saving in time of a day to a day and a-half from Fort William to Montreal, allowing about 70 hours to go through his 442 miles of canal. I do not think he will get any practical vessel captain to agree with him in this. I think that a 10,000-ton ship would average less than two miles an hour, and, if I am right in this, it would mean eleven days from Fort William to Montreal instead of six by the new St. Lawrence route.

All Hands on Deck

Steamers navigating canals must have all hands on deck all the time ; and they must either tie up for rest or carry a double crew, which is very expensive.

Insurance

The principal disadvantage we now have on the St. Lawrence route is one cent a bushel extra for insurance in coming through the Welland Canal, and we are threatened with another extra cent for going through the lower canals, thus making two

cents a bushel for extra insurance for passing through the 73 miles of canal. What would Lloyds charge for insurance through the Georgian Bay Canal, 442 miles long?

Up, or Return, Cargoes

By the St. Lawrence route we get considerable "up" cargoes at all points between Montreal and Sarnia. But there would be comparatively little by the Georgian Bay route—and vesselmen appreciate return cargoes.

Not Enough Water to Feed It

The engineer says that for \$9,000,000 extra he can secure a sufficient water supply to feed the Georgian Bay Canal. We may assume that he is correct, and will only say that some people think differently, and have some serious doubts about a future supply.

At a 3c to 4c rate from Fort William to Montreal, what chance has this long, expensive canal in competing with all its rivals, especially the St. Lawrence route, which is only 282 miles longer (one day's run), and a proved route. The only reason I can see for building that canal is the one given by our Premier when he says there will be work enough for them all. But if he will only tell Mr. Graham to make the St. Lawrence route big enough this time, it will be a very long time before the Georgian Bay Canal will be required.

Waterway to Winnipeg and the Prairies

At the present time navigation ends at the head of Lake Superior (Fort William) and Duluth, a hundred miles further to the extreme end of Lake Superior. It would not be surprising to see it extended to Winnipeg, and possibly to the foot of the Rocky Mountains, for a small class of barges, navigating the Kaministiquia River, Lake of the Woods, and the numerous small lakes and rivers to Lake Winnipeg. The Red River, with its head waters in Minnesota, and the Assiniboine, empty into Lake Winnipeg, and run thence by way of the Nelson River to Hudson's Bay, being many hundred miles in length. The great Saskatchewan also empties into Lake Winnipeg, and runs in two branches to the fertile valley of Saskatchewan, almost to the foot of the Rocky Mountains. The waters of these rivers, together with the waters of Lakes Winnipeg, Winnipegosis, Manitoba, and other smaller lakes and rivers, could be carried down to Fort William and make a continuous waterway from the Rocky Mountains to Liverpool, a distance of five or six thousand miles. You may think these are only my views, and are visionary; but only three years ago a company of American and Canadian capitalists applied to Parliament for a charter to build such a waterway for barges. They asked no bonus, but said they had plenty of capital, and only required a charter. The Government refused their request, replying that the waterways of Canada must

be built, owned and controlled by the Government. The scheme therefore fell through.

Canal from Hudson's Bay to Winnipeg

Only a few days ago the report of the Government engineer, who has just located the railway from Winnipeg to Hudson's Bay, about 400 miles, was sent out, stating that a canal between these points is feasible; and I have no doubt that in a few years ocean ships will be loading grain at Winnipeg for Liverpool via Hudson's Bay. The whole prairie country is dotted with lakes and rivers, and we lately learn through the public press that the great Peace River possesses 1,500 miles of navigable waters. What a field for navigation!

Freight Rates on Grain via the St. Lawrence Route

The St. Lawrence route has forced Buffalo railways to reduce their rates from Buffalo to New York from $5\frac{1}{2}$ cents to 4 cents for the coming season, which leaves only one cent a bushel as the water rate from the head of the lakes to Buffalo, in order to compete with the St. Lawrence route. On the other hand, we are at a disadvantage as regards the ocean rates from Montreal to Liverpool. Last summer grain was carried from New York to England at $4\frac{1}{2}$ cents, while 7 cents was charged from Montreal. This was owing, partly, to the scarcity of cargoes at New York, and partly to the still higher rates of insurance, which is now our principal dis-

advantage until all our improvements shall have been completed from Port Colborne to the ocean. But if the ocean rate is again 4 cents from New York and 5 cents from the head of the lakes, making a 9-cent rate to Liverpool, requiring, evidently, greater competition in ocean rates at Montreal, the solution is to complete the improvements at Montreal and the ship channel to the ocean. This will lower insurance, and induce greater competition among ocean ships. It is of little benefit for our vessels to lower the rate to Montreal if the ocean lines charge a higher rate from Montreal than from New York.

The profits of the New York ocean lines are mainly derived from their passenger traffic, and their freight rates are a secondary matter; they must have cargoes for ballast, and consequently they cut the rates in competing with the St. Lawrence route. And the more we see of this contest for trade with the Americans the more we must conclude that the St. Lawrence route must be enlarged, if we are to successfully compete with the Americans for even the trade of our own country, as the records show that there passed through Buffalo last year 18,000,000 bushels of Canadian grain.

The rates on grain via the St. Lawrence route are: From Calgary to Liverpool, about 5,200 miles, 33 cents a bushel—of this the C. P. R. gets 1,200 miles of transportation to Fort William at about 21 cents a bushel; then lake vessels, from Fort William to Montreal, 1,200 miles, 5 cents a bushel; and the

ocean ships from Montreal to Liverpool, 2,800 miles, 7 cents a bushel.

Some Interesting Figures

From Port Arthur to Port Colborne by water is	850	miles
The Welland Canal (25 locks) is	26 $\frac{3}{4}$	"
Port D'Albousie to Prescott (lake and river) . .	227	"
The Iroquois Canal is	7 $\frac{1}{2}$	"
Farren's Point Canal is	1 $\frac{1}{2}$	"
The Cornwall Canal is	11 $\frac{1}{4}$	"
The Soulanges Canal is	14	"
The Lachine Canal is	8 $\frac{1}{2}$	"
The Morrishurg Canal is	3 $\frac{1}{2}$	"
Lachine Lake is	15	"
Coteau Lake is	32 $\frac{3}{4}$	"
Dickenson's Landing to Farren's Point is	5	"
Farren's Point to Morrisburg is	9 $\frac{1}{2}$	"
The head of Morrisburg Canal to Iroquois . .	4 $\frac{1}{2}$	"
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Total from Fort William to Montreal	1,217	miles
Less total of seven canals with 46 locks	73 $\frac{3}{4}$	"
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Balance is total lake and river navigation	1,143 $\frac{3}{4}$	miles

Elevator Capacity

West of Fort William, in about 1,500 buildings along 6,000 miles of railway, 50 million bushels; about a dozen elevators at Fort William and Port Arthur, capacity about 20,000,000 bushels; east of Fort William, at Midland, Depot Harbor, Victoria Harbor, Meaford, Collingwood, Owen Sound, Goderich, Sarnia, Port Colborne, Toronto, Kingston, Prescott and Montreal, about 20,000,000 more. This makes a total storage capacity between Fort

William and Montreal, both included, of about 40,000,000 bushels.

There is not enough elevator room east of Fort William. When they are filled the grain generally goes to Buffalo for want of room there. The area of our Northwest is estimated at about 170,000,000 acres. Less than 5% of it is yet under cultivation, which produces 100,000,000 bushels of grain yearly, employing our Canadian fleet of about 70 steel ships. What sized fleet will we be employing at the end of the next 60 years, when we will likely have a population of about 60,000,000! Enlarge the St. Lawrence soon, and make the fourth system big enough.

A Summing Up

Now, I have taken you over a vast area, from the Rocky Mountains to Liverpool, five or six thousand miles, to try to show the vast extent of our waterways, and to bring to your attention, if possible, their future possibilities, and their immense value in cheapening the cost of transportation of our goods to the English markets. Canada in the near future is certainly destined to be one of the greatest grain-producing and exporting countries of the world, and it is our privilege to make the St. Lawrence route the main waterway at the cheapest cost. We have to the south of us a great country, determined if possible to carry our goods as well as their own, and the question of cost does not easily

deter them. At present their cost of freight is about equal to ours from the head of the lakes to the Atlantic, but they offer better ocean rates. Therefore to successfully compete we must enlarge our canals to make a safe and easy channel to the Gulf. It is necessary also to spend more money on our inland waterways, to make "feeders" for the St. Lawrence. Our Governments have bonused railways to the extent of \$350,000,000; the different provinces and municipalities have given them as much more; and yet the railways own the property. We have paid \$120,000,000 for canals, and the country owns them, and uses them to check the railways that were also built with our money. This is not fair to the vesselmen of this country, who have been instrumental in largely reducing the cost of transportation. As our exports increase, our loss to railways will also increase. We should, therefore, spend less money on railways and more on navigation—not on the Georgian Bay Canal, to permit it to parallel and compete with the St. Lawrence route at a yearly loss of six to eight million dollars; but on "feeders" to the St. Lawrence, which is now a proved system. Develop the waterways of the prairies, to enable them to utilize their large lakes and rivers, now partly navigable for hundreds of miles, for a cheap class of barges to carry their produce by water to Winnipeg, Hudson Bay and Fort William, in competition with the railways, and at less than half the cost.

We willingly give credit to the Government for

their energy in developing the St. Lawrence in the last five years, and especially the last two years, the results of which are proving satisfactory between Fort William and Montreal. Perhaps the ocean rates will also improve with competition, when the shipping facilities at Montreal and the ship channel are finally completed, in a couple of years.

We should also admit English goods free of duty, and lessen ocean rates by giving ocean lines a chance to obtain return cargoes to Montreal. Return cargoes mean cheaper rates both ways, and are a vital spot in our transportation question of the future. Our Government deserves credit for giving England a preference of one-third in our rate of duty, but I think they should go further, and admit English goods free, or at all events charge not more than 5% duty. If our revenue requirements will not stand this, let us raise our duty on all foreign countries requiring our markets. By doing this we will get more return cargoes for our ocean ships and cheaper goods for our own people, and we will then be treating England as fairly as she treats us in trade matters. They admit our goods free: why could we not do the same with them? England is our best and only market. If we open our markets free for English goods, they will appreciate it more than the present of a dozen *Dreadnoughts*, and we will prove our willingness to deal with our best customer on a fair and equal basis. We will also, further, secure the friendship and the markets of

England, which is a commercial nation depending largely upon the sale of its manufactures. When they admit our goods free, they have a just right to ask us to reciprocate. This treatment is due to England, and nine-tenths of the people of this country will benefit by it. Especially is this the case with the marine interests of the country, that would get a great benefit from more return cargoes.

Some Say Enlarge the Welland Only

Some of our marine men say it will be sufficient to enlarge the Welland Canal only. It may be right for the near future ; but for the distant future I think we should consider the St. Lawrence route as a whole from Port Colborne to the Gulf of St. Lawrence. Judging from my past sixty years on the Welland Canal, and looking ahead at the future probabilities of the route, I think we should commence at once to enlarge it to admit the passage of a 15,000-ton ship, by making it 30 feet deep, with locks 800 feet long and 75 feet wide, so that there will be room for big ships to make good speed, and to avoid jamming their sides in small locks, as is the custom now, and is costing them so much extra insurance. If this be done, I think the Government need pay little attention to the promoters of the Georgian Bay Canal scheme.

At the conclusion of Mr. Conlon's paper, a

vote of thanks was tendered him, moved by Mr. J. H. Thompson and seconded by Mr. Joseph Battle.

A largely attended joint meeting of the Thorold and St. Catharines Boards of Trade was held at St. Catharines June 9, with President McGhie of the city Board in the chair, when the following resolution was moved by Mr. J. H. Thompson of Thorold and seconded by Mr. R. G. W. Connolly of St. Catharines :

" WHEREAS, the development of the various waterways, comprising what is known as the St. Lawrence route from the Canadian West to the Atlantic seaboard, has received the favorable consideration of the various successive Canadian Governments since the year 1815 ; and

" WHEREAS, the sum of \$120,000,000 has been spent in developing the different sections of that route, to suit it to the requirements of navigation and of our growing country ; and

" WHEREAS, the time has come when a far more extensive Canal System must be provided to meet the fast-increasing demands of Western development ; and

" WHEREAS, the St. Lawrence route has proved itself capable of competing with all rivals, whether rail or water, on account of its favorable geographical position, natural advantages, and ease of navigation ; and

" WHEREAS, within the memory of men now

living our navigation requirements have outgrown the capacity of three successively enlarged canal systems, and our supremacy in that respect is thereby imperilled ; therefore

“ BE IT RESOLVED : That, in the opinion of this joint meeting of the St. Catharines and Thorold Boards of Trade, it is very highly desirable that the Government of Canada should at once proceed with the enlargement of the entire system, from Port Colborne to the Atlantic ocean, to such dimensions as will permit the passage of the largest lake vessels from the head of lake navigation to the seaboard, in order that this intensely important national question may be safely settled for all time to come ;

“ AND FURTHER RESOLVED : That this joint meeting heartily endorses the address read by Mr. Thomas Conlon before the Thorold Board of Trade May 10, 1909, and the statements and arguments contained therein ; and memorialize the Government and Parliament on the lines thereof ; the chairman of this meeting to name a committee to prepare such memorial.”

The resolution was adopted by a unanimous vote, and the President appointed Mr. S. W. Secord, Secretary of the city Board, and Mr. Thomas Conlon of the Thorold Board, to prepare the memorial.

