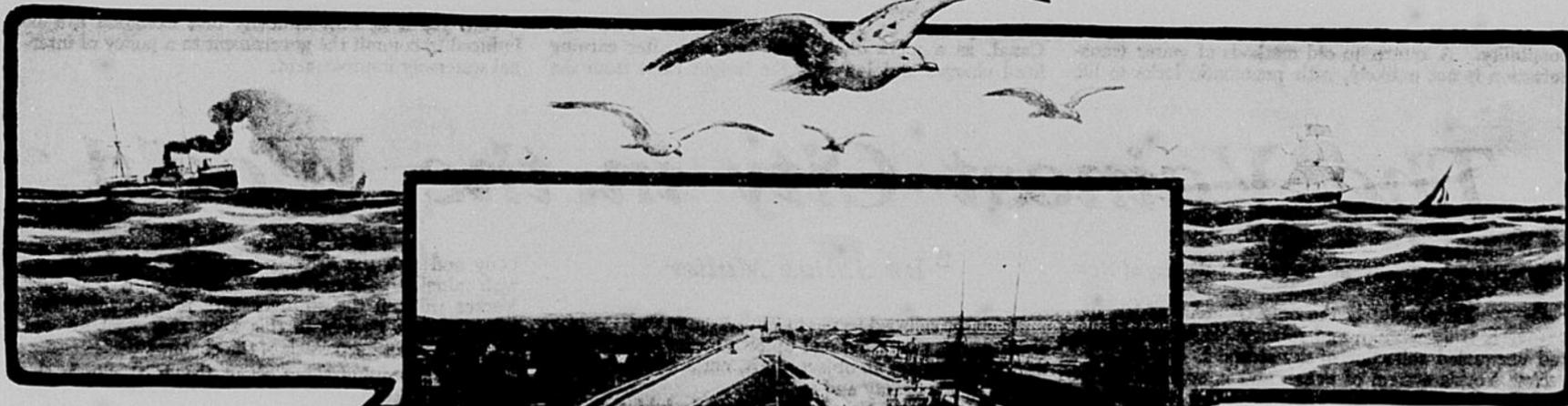


# Improving Our Waterways

## Possibilities of Lake, River and Canal Navigation



**B**EFORE the advent of railroads the natural waterways, the rivers and the lakes determined the direction of all commerce, and therefore the trend of civilization. From the beginning the natural waterways have been the highways between communities and nations. These were opened and improved as necessity demanded. To hold possession of the mouth of a river was to control all the territory drained by that river and its tributaries. We in our national infancy came very near an open rupture with Spain over the free navigation of the Mississippi which Spain denied.

With all our inventions in the line of transportation the water route still remains by far the cheapest. It may be natural or artificial — the difference being in the original cost of the canal and a slight cost of maintenance only. "There is no use trying to secure the lake traffic — we can't compete with any transportation line where God Almighty keeps up the trackage." This was the opinion of a railroad president whose lines came into competition with lake commerce. And it is true of all of our internal waterways, where if God Almighty does not keep up the trackage, Uncle Sam does — in other words, the waterways are free.

The Panama Canal project has awakened a universal interest in the subject of water transportation. And if only the canal projects now under way and projected are pushed to a finish the inhabitants of Mars will soon be tracing on their maps of Earth its wonderful network of commercial canals.

It is to be regretted that the money appropriated for the Panama project was not turned to internal canal building. The greatest possible amount of commerce that will ever go through the Panama ditch will be but a fraction of a per cent of the traffic that would be accommodated by the waterways which could have been built for the money.

The canals at the Sault Ste. Marie, which measure only the tonnage of Lake Superior, carried over 47,000,000 tons of freight during 250 days of 1905, that being the period of navigation. This is a greater tonnage than is carried by the Suez, the Manchester, and the Kiel canals combined, and these are the three greatest canals of the world. An idea of our internal commerce can be gathered from the tonnage that passes through the St. Clair River, exceeding as it does the combined tonnage of our Atlantic ports.

North America is well supplied with natural waterways, and these waterways are so nearly connected that it needs but little canaling to make them continuous from the Gulf of Mexico to the Arctic Ocean, and from the Great Lakes to the Gulf. Even it is feasible

to connect the Gulf with the Pacific through the heart of the continent.

The deepening of the Erie Canal will allow boats and barges carrying thousands of tons burden to pass from Chicago and Duluth direct to New York. Already small boats may pass from New York harbor up the Hudson, through Lake Champlain and the canal to the Gulf of St. Lawrence and the head of the Great Lakes. From the head waters of the Missouri it is not far to Flat Head Lake in Montana, where steamers load for the Columbia River and the Pacific coast.

On the Atlantic coast from the mouth of the St. Lawrence to South Carolina an intercoastal system of canals already exists. This with a canal across Florida and a little dredging along the coast of Louisiana and Texas could be extended to the Rio Grande.

A ship canal is almost completed from Galveston to Houston, a distance of fifty miles, and the government is improving the Trinity River to enable Dallas, 225 miles from the Gulf, to enjoy the distinction of being an "ocean port." A ship canal is being built from Boston harbor to Narragansett Bay, and the Hudson is being deepened to allow ocean-going vessels to come as high as Albany.

The lower Mississippi River under the River Commission is being kept open for vessels with a draft of fourteen feet at all seasons of the year as far north as Alton. And a determined movement is now on foot to connect the Chicago Drainage Canal, which has a uniform depth of twenty-two feet as far as Lockport, with the Mississippi River through the Desplaines and the Illinois rivers. It is estimated that this work can

be done and a uniform fourteen foot channel maintained at a cost of \$27,000,000.

A deep waterway from Lake Michigan to the Gulf of St. Lawrence has long been agitated, but so far no progress has been made toward government action owing to the opposition of New York and other rival interests. There is, however, a canal around Niagara

Falls, the Wellington, but it is wholly on Canadian soil and carries only twelve feet of water.

Canada seems to have realized the importance of its water communications. It is contemplating a twenty-two foot canal in place of the Wellington, which with the canal at the Sault Ste. Marie would give the great bulk of Canadian shipping a direct and uninterrupted route from Port Arthur to Quebec.

But the greatest project and one that is likely to be consummated in the near future, is a canal from Georgian Bay to the Ottawa River, cutting out the lower lakes and shortening the route from western Canada to the sea by several hundred miles.

A canal route from Lake Superior through Rainy Lake, Rainy River and the Lake of the Woods was a pet scheme of Sir John McDonald in his time, and work was actually begun on the connecting canals. This route would not only connect the great Saskatchewan valley clear to the mountains with the Great Lakes, but a deepening of the Nelson River would join the whole network of internal waterways with Hudson's Bay. And all this is perfectly feasible.

A canal route has recently been surveyed to connect the upper Mississippi with Lake Superior. And it would take but a small amount of canaling to join the Minnesota and the Red River of the North, as one has its rise in Big Stone Lake, the other in Lake Traverse, only seven miles apart.

In Ohio, where the people have always believed in internal water transportation, a new feature has been introduced on the canals. The trolley has taken the place of the mule, and where one barge was towed by his muleship at a snail's pace, a half dozen now follow the witch with her broomstick.

With the absolutely feasible canal projects carried to completion, nearly every city of importance east of Denver would be linked up with some branch of the waterway system. In the arid West and the semi-arid Southwest the system of reservoirs and irrigation canals will do much to aid this plan of water communication. The navigation of the Rio Grande and even the Pecos is not impossible when the surplus water that goes to waste in times of flood is conserved and doled out when needed.

Canal building where there is a pos-

