

They would require, (according to the Engineer's Reports) a cutting 200 feet deep for some two miles, and an average cutting of some eighty feet deep for six miles and a half. No such cut as this was ever made on any work, and by giving the banks of the cut a slope of one and a half feet to one foot in depth, the opening on the surface would be eight hundred feet. Still, this is considered quite a trifle by the friends of the project. Its estimated cost is \$25,000,000, but more likely to be forty millions. Of course the improvements of the St. Lawrence Canals, the Caughnawaga Canal, and the New York Champlain Canal, would have to be added to the above sum. The next project, which has also been warmly advocated by many, is what is called the Ottawa Canal, to connect Montreal with Lake Huron, via Lake Nippising and French River, which has been surveyed and reported on.

This project also shortens the distance from Chicago or Milwaukee to Montreal, about 430 miles. To understand its merits I would begin by stating, that it is the breaking up of the ice in the Straits of Macinae, in the spring, which opens navigation and it is the closing of these Straits by ice in the fall, which puts an end to navigation for the year. Now, suppose two propellers of eight hundred and fifty tons, leaving Milwaukee together, bound for Montreal, one by the Welland Canal, and the other by the Ottawa route. Both vessels keep together, as far as the point in Lake Huron, where it is necessary for one to diverge to enter the French River. This river has to be ascended by a lockage of seventy five feet to reach the summit level in Lake Nippising, and of course there has to be lockage of seventy-five feet more to get back to the level of Lake Huron. This engrafs on the route 150 feet more lockage than on the Welland Canal route. The Ottawa River is reached through the river Mattawan, both of which are dammed up in various places to admit of their navigation, making them nothing more or less than large canals. At night it would be almost impossible for the propeller to sail except very slowly, while the other propeller could sail by night as well as by day, at her full speed. The whole lockage would be at one place, on the Welland Canal, for the St. Lawrence Canals would not require to be used on the downward voyage. Now, I have never seen a ship master, who has not acknowledged that the propeller would sooner be in Montreal by the long route than he could be by the shorter one of four hundred miles, and from the more northern position of Lake Nippising, navigation would be later in opening and sooner closed. The estimated cost of this work is \$24,000,000, (but probably forty millions), and added to this again, would be the cost of the Caughnawaga Canal, and New York Champlain Canal, without which, the propeller via the Ottawa could neither reach New York nor Lake Champlain.

It may also be well to explain that I am adverse to the construction of a canal around the falls of Niagara on the American