restricted by the Champlain Canal, which, including its junction with the Erie Canal, is 73 miles in length, with an up lockage of 55½ feet, and a down lockage to the Hudson of 150 feet, equal to 205½ feet. It has 20 locks, each 90 feet long, 15 feet wide, with 4 feet water on the sills. It admits vessels of 50 tons, and its capacity annually is equal to 792,000 tons each way, or one half the capacity of the Richelieu Canal. It is barely possible that this canal could be enlarged so as to have Lake Champlain for a summit level, otherwise it would be useless labor to enlarge the Provincial Canals leading into that sheet of water.

It is well established as a practical fact, that Western produce has outgrown, and is outgrowing all available channels to the sea-board—its greatest outlet, the Erie Canal, has been enlarged to the utmost its hydraulic powers will bear. Theoretically it is assumed that 300 lockages per day can be passed, and this will require 18,000 cubic feet of water per minute, and the supply is only about 25,000 cubic feet—therefore *building a ship canal round the Falls of Niagara* will be no relief to the surplus freight of the West, as it must go through the Erie Canal to reach the sea-board. Nor will the enlargement of the Illinois Canal remedy matters. It is almost, if not entirely physically impossible. First, for want of sufficient supply of water at summit level, and, secondly, the impossibility of making Lake Michigan the supplying reservior. Even if completed it could not become a channel for the transmission of bread-stuffs, and the passage through an inter-tropical climate would destroy the material.

The Erie Canal, at the rate of *ten* lockages per hour, for a period of 220 days each year, with vessels of 200 tons, can send down 4,880,000 tons, and a like quantity up. The various railways leading from Chicago, can probably do as much more, so that 10,000,000 tons exhausts the available outlets of the United States.