

it is practicable to develop, within a reasonable cost, a commercial route between the Great Lakes and the Atlantic seaboard.

PHYSICAL FEATURES.

The brief historical summary of the constructed or partially constructed water-ways, with almost constant improvements and enlargements, by both the United States and Canadian Governments, to keep pace with the rapidly increasing commerce of the Great Lakes and the increase in dimensions of vessels, and particularly in their draught, leads us, in our discussion, to attempt to predict for the near future, either by lake, river, canal or by other adequate means, an enlarged commercial highway between the Great Lakes and the seaboard. Any one who traces the very interesting history of the improvement of the water-ways up to this time, and studies only casually the history of commerce on the Great Lakes, will be led quickly and inevitably to a conclusion that the opinion outlined in the beginning of this paper is correct, that a channel large enough for vessels of a draught of 20 feet, the cargoes of which will average not less than 3000 tons weight, is absolutely necessary. The various projects, with their estimates following, are based on these requirements.

The "Soo" Canal and lock, now being built by the United States Government, is fully equal to these requirements. The canal being built by the Canadian Government is not equal to them. To construct a lock costing, with its approaches, several millions of dollars for a draught of only 18 feet is, in the opinion of the author, unwise for reasons, some of which have already been given and for others which will appear as this discussion goes forward.

OTTAWA SHIP CANAL BETWEEN GEORGIAN BAY AND MONTREAL.

In 1858 a report was made on this project by Mr. Walter Shanley civil engineer to the Legislative Assembly of Canada.

The route lay from Lake Huron up the French River to Lake Nipissingue, thence across the watershed of the St. Lawrence and Ottawa into Trout Lake at the head of the River Matawan, a tributary of the Ottawa River, thence down the Matawan to the Ottawa River, and along its course to its mouth, thence by the Lachine canal to Montreal. The supply for the summit level was to be taken from Lake Nipissingue, which was to be raised by dams to the height of Trout Lake, 23 feet higher than its natural level, enlarging the area of