

The writer is indebted to General O. M. Poe, United States Engineers, who has charge of the canal and is building the new lock, for these details of operation.

In the Niagara locks, one-fourth smaller, a single steamer will readily pass in thirty minutes.

The earth slopes being paved, speed can be made on the two long levels of 6 and 12 miles each, which form three-fourths of the total length.

The Niagara Canal can be thus passed in eleven hours, and the run of 110 miles to Oswego can be made in eight hours. At Oswego, the cargoes transferred to canal-boats are then ~~145~~ miles nearer to New York than at Buffalo, and have 168 miles less of canal to traverse to reach the Hudson.

The average of many trips to the Hudson, of steam canal-boats with consort, shows six days from Buffalo against four days from Oswego.

This shows a clear saving of one and one-fifth days, or 20 per cent. of the time of the present trip from Buffalo.

Having two independent and competing water-routes available, shippers would also save the present excessive elevator charges at Buffalo.

It is no part of the present Niagara Ship Canal project to provide for a canal of similar size through New York State to tide-water, as has been estimated for at various times, by which Lake steamers should carry their cargoes to New York or to Europe.

Such projects call for impossible expenditures, and ignore the fact that different waters demand different types of vessel. The lakes, the canal and river, and the ocean, each have their distinctive style and equipment.

Such a waterway, if built, would not be so used. Steamers fitted to safely weather lake storms would not carry their costly and idle equipment through 360 miles of canal and river to New York. Barges of one-tenth the cost would do the work better and cheaper, while much of the expensive construction needed on the ocean would be superfluous on the lakes.

The present 7 foot canal will be fully equal to vastly greater business than it has ever done, when the double-