large, and to allow this they would have to be capable of being handled very rapidly. They should *be so* capable in any case.

NOTE 1. It may be explained that the tide rises higher and falls much lower than the ordinary level of the river. The outlet at the falls is narrowed greatly, and has a dike of hard rock running across it about 15 to 20 feet below river level, causing the "reversing falls."

NOTE 2. The probable reasons why ice does not form in this upper harbour area, comprising the narrows and Indiantown basin, is that the water is very deep therein and in an immense area above, and a body of comparatively warm water comes to the surface from under the ice on the one hand, while on the other the tidal water from the sea is also much above freezing point, so in their ebb and flow they prevent the formation of ice.

The second, or twin lock, is a necessary precaution against accident to the one in use, and a convenience for rapid work when traffic becomes large. It could be arranged so as to be used as a dry dock, that could be entered at all times from the river level, and if the tide were low at the time a large portion of the water could be run off rapidly without any expense for pumping, so that a vessel while waiting for the tide could have an examination made of her bottom, and if work on it were required she could remain a longer time. The lock could also be arranged with grooves so that the floating bulkheads, which should be held in reserve for use at the entrances in case repairs to the locks themselves were required, could be used in one or more intermediate grooves; thus two moderate-sized vessels could use the dock at the same time, entering and leaving when ready, and in this way it would be adapted for the use of the very largest merchantmen afloat or for a very moderate-sized vessel.

For a number of miles up the river into the Long Reach, so called, open water often extends almost all winter, and there would be little difficulty in keeping navigation open all the year in quite an extended area beyond the line shown on map No. 1 as "Edge of ice."

Present and possible lines of railway and docks are indicated in a general way on map No. 1, and more in detail on map No. 2, showing the high and low level service on the bluffs and wharves.

The general features of the river are shown by the sketch map No. 3.

No recent and general survey of the river has been made, and the exact nature or depth of mud at the approaches to the canal are unknown, but from the configuration of the shores one would suppose that at the outer end of the canal there would be rock foundation for the locks at or above the desired depth, while in the cove