angles with this main head-race will be minor head and tail-races, arranged at suitable intervals with intervening lots for the erection of factories and mills; about one-half of the water used will pass into the main tail-race, and the balance directly into the river. All the hydraulic lots on the island will have access by streets from 60 to 100 feet in width, and will generally average 300 feet in depth by 100 feet frontage each.

The main head-race will commence at the upper end, and be gradually extended downwards, as occasion may require—a portion of the excavation will be placed in an embankment to unite the several small islands at the upper end, and thus increase the head of water to the entire system of mills and factories. A fine basin of still water having a length of 5000 feet, by an average width of 2500 feet will be formed, and serve as a "mill pond" for supplying water to the mills.

This smooth and quiet sheet of water will freeze over in the early part of the winter season, and prevent floating ice and *frazil* reaching the different head-races and flumes about one mile below. The greater portion of this moving, matter in descending the river, will be drawn by the swift current at the head of the island into the south channel.

The sketch submitted, shows the arrangement when the work completed. The section proposed to be carried out in the first instance is the Dam, with such portions of the main and minor head and tail races, on the main land, as will yield sufficient earth excavation to form the embankment around and above the crib-work of the Dam. The hydraulic lots contiguous to the races, so constructed, may then be disposed of, and additional ones brought into the market from year to year in accordance with the demand—by simply extending the races.

The plan now generally described, will thus be seen to embrace a comprehensive scheme, uniting the requirements of the city water works for all time, with an almost unlimited supply of power, for manufacturing purposes, which in itself will react on the general prosperity of the city and entire community to an extent which but few can realize—an improved and facile canal navigation, with the west; the improvement of the navigable channel of the Lachine Rapids, by the only method open to adoption; also, the