

good many cases already, which consists in enclosing as large an area for the storage of tide water, as can be had by damming a ravine or the mouth of an estuary or river so as to permit the rising tide to overflow the dam in a way to fill the enclosure. Upon the tide receding, the volume of water impounded, especially when supplemented as it may be by the flow of the river itself; or even if there be no other delivery of water into the enclosure; will suffice to keep a turbine or other wheel a going during the whole interval between two successive tides, with of course increasing energy as the tide falls, and again decreasing power as it rises again.

As early as in 1847, the writer then still in his teens, advocated the damming of the St-Charles estuary, across from the city of Quebec to the Beauport side, a distance of quite a mile at the site proposed. This would have kept up the water within the dike to high tide level all the year round.

His object then was not with the idea of any water power to be derived therefrom or utilized ; but to afford water up the St-Charles for ship building purposes and for the dockage of vessels which, on opening the lock gates at high tide, or rather when the outer water reached the level of the inner, would allow of vessels passing in and out or both ways ; or by lockage, when the outer water fell either short of the inner or was at a higher level : a scheme which may still be carried out.

Now it is conceivable how, in this case, the falling tide might be rendered useful and so to say operative, though in an indirect or negative manner, by having along the dike, on its outer side, of course, and running its full length or less, a line of shafting laid below low water level and causing it to be worked or rotated at intervals along the line, by as many turbines driven by the out-pour of water through sluices provided for the purpose : the shaft being, as in the hold of an ocean steamer, carried along on proper pillar-blocks to the screw propeller prolonged into a power house at either or both ends, on the opposite shores of the river ; the size of the basin being such, that, continuously replenishing by the flow from above, such a sheet of water would fall but very little until supplemented by the next rising tide through overflow weirs for the purpose with their crests at the proper level and with gates adjustable to suit.