

tinuous, could not either be of uniform intensity; since, as already said, the varying velocities of motion must at certain moments of the day, more so during certain periods of the month and still more so during the varying seasons of the year, be subjected to constantly varying fluctuation.

We have all noticed during our summer rambles along the beaches of the St. Lawrence, or of any other tidal river, the differences in level of the tide water of those to which the tides attain. This may be seen sometimes in cities where the ebbing tide will leave its mark upon a pier or wharf or jetty, or on the rocks on the foreshore, where there are any. These, however, are but fitting or momentary mementoes which die away or are obliterated by the sun's heat or an evaporating blast of wind; while the marks left along the sea coast or the shore of an estuary, remain there during the whole period or duration of a series of losing tides; that is when the tides are waning with the waning lunar attraction. These riparian lines of level or horizontal contour lines so well defined by the chips and saw dust from mill streams, twigs, leaves, rushes, and flotsam from passing vessels, or sweepings thrown overboard, and what not else—these lines thus traced out along the river shore persist until again a series of rising or gaining tides with increase of the moon's attraction, cause every successive flow to wipe out and remove or wash higher up on the beach the detritus brought in by the preceding tide.

But this alternating action of the rising and falling tide water can be made continuous in its results as with the wind which is another intermittent or irregular source of power.

In the same way as the wind can be utilized at irregular intervals for work not necessarily consecutive or continuous; as in pumping water into a railway or other tank, sawing fire wood, threshing grain, pumping out the bilge water of a pontoon or other vessel, grinding corn, etc.—so could the tides be utilized, as will be explained hereafter; but for continuous action, the only and best way in which the power afforded by them can be brought to bear, or one of the best ways in which this can be done, is by pumping and storing sufficient water in a reservoir or cistern of adequate dimensions, to hold out from tide to tide, or from day to day, moon to moon, and season to season. The dimensions of the recipient would have to be regulated so as to equalize the outflow from it or nearly so, and the outflowing stream could be used to revolve an