

What would the citizens of Hamilton give to exchange their costly Canal for the almost free Port of Toronto? With them it is *Canal or no Port*.

It may justly be asked, whence comes the desire to risk the stability of a good natural Harbour, by making another costly channel, which, at the best, can only benefit a partial navigation?

To the east end of the Town it can bring but evil, if it injure the west of the Harbour.

Is the entrance to the west of any benefit to the west end of the Town?

Are not almost all the commercial wharves east of Yonge Street? And is not Yonge Street the pivot around which all commerce centres?

Will any merchant ask, or care whether his goods come in at the east or at the west end of the Harbour, provided the Harbour charges be light? Will he consent to pay enormous Harbour dues merely for the accommodation of a partial navigation? In no other light can commerce look upon this project of a Canal. Lastly, as Provincial property, can there be a reasonable hope that any Legislature or Government will assent to the making of a second opening into one of the finest Harbours in the Province, at an acknowledged risk and heavy cost, unless an urgent necessity can be shown for such risk and such cost?

Until this vexed question is set at rest, the citizens of Toronto generally will not turn their attention with due anxiety to the preservation of the valuable Harbour they have the happiness to enjoy.

I have endeavoured to show, in the light I see it myself, that, physically, a Canal to the east would be destructive to the Port; that its nautical advantages are largely delusive; that it would act prejudicially on the commerce of the Town; and, lastly, that the assent of Government to such a project is all but hopeless. I will now turn my attention to a subject more worthy of the care and economy of a great commercial town like Toronto—the improvement of the Harbour, active steps of preservation of the main features of it, as traced out by the hand of nature, repairing that which is decaying, and improving without dangerous innovation such parts as are susceptible of improvement, is the only safe course that the guardian power of the Port can pursue. Like the human system, in all ordinary derangement, ordinary care may suffice, but where the danger is imminent, we call in the most skilful aid; so would I, in the important case of the derangement of any vital feature in the Harbour, consult the most eminent engineers, nay, a board of engineers, for no expense should be spared to secure the stability of a Port, upon which the value of so much property depends.

I, in the matter of the improvement of the Harbour, only give opinions founded upon long observations, and which observations may be useful to engineers; for it is only by observations on the present operations of nature, that we infer of the past, or anticipate for the future; therefore, in furtherance of my opinions and observations, although I did not mean to touch upon the theory of the formation of the Peninsula, yet as the means for its preservation call for some opinion of its origin to account for its present appearance, its constant state of transition however gradual, and to adopt measures to retard its decay, I here submit them.

The Peninsula is still fed by drift and detritus from the east,

and still grows from the root whence it sprung, the point where the land falls away at the head of Ashbridge's Bay, striking out in a fair field of growth into deep water, the present formation, the result of ages of destruction of the highlands of Scarborough, even from the undefined time where the Lake changed its level from a higher to a lower, of which the whole boundaries of it bear incontestible evidence.

The action of the north-east storm has had the same effect upon the *then* advanced promontory of Scarborough, as the north-east storm has upon it at the present day. Acres and acres have been removed from the flats below Scarborough Heights within my recollection.

The result of ages of this work of destruction has been the formation of the present peninsula and shoal, the latter of which is upwards of a mile in width and six miles in length, the crest of it being the present Peninsula. If my theory be correct, the superstructure will be the gravel and stone of Scarborough flats, underneath of necessity *clay*, and below that most probably indurated *clay*. The crest has started in continuation of the land, with its broadest part above water, where now it is narrowest, for as the Peninsula extended west, and the Promontory of Scarborough receded from erosion, so did the neck of the Peninsula at the east, as it could not stand out prominent from the protecting land. Hence the more rapid retrocession of the Peninsula east, and the tendency to a *Presqu'isle* formation.

The proof of this retrocession of the Peninsula or crest of the shoal, is traced in the flat shelving shore, leaving little water as the crest recedes from the south, and meeting comparative deep water to the north, the Peninsula not being acted upon by the sea on that side. The modern marks of retrocession, within my own observation during the last twenty-five years, are the long line of aged trees undermined and thrown down by the sea all the way from the head of Ashbridge's Bay to Privat's Hotel.

On examining the beach on the inside at the head of Ashbridge's Bay, although the Lake has frequently made breaches there, and swept over the whole part, from where the trees cease east; increasing the beach inside, as it was swept the outside; yet there is no such thing as that which we see the breach in Toronto Bay; that is, two long piers of sand *inwards*, showing the range of current in; in Ashbridge's Bay there is no ready vent in an opposite direction for the bodies of water thrown in by the sea, consequently it returns in under-current again through the beach; hence no leading marks of a current, but augmentation of the beach within.

In Toronto Bay, the wide mouth of it affords rapid exit for the water as fast as thrown in, and hence the long banks of sand above water as leaders, and the mass ejected at their head into deep water.

It is easy to account for the spreading of the Peninsula tree-like to the west. The material being finer as removed from the source of supply, spreads over the lake, as seen by the turbid waters in all easterly gales; these gales are invariably met by a counter gale from the south-west, driving back the charged water upon the west end of the Peninsula and the mouth of the Bay, the reaction of the water from the Bay causes the deposit which forms the bar at the entrance. It is useless to speak of the phenomena of *ridges* caused by the action of the waves.