fair average depth; thus we perceive that there is actually more water removed by evaporation than the Bay is capable of containing at any one time. How, then, is this loss supplied? By an *under-current* of cold water constantly rushing into the Bay from the Lake, between the end of the Queen's Wharf and the bar buoys. This is clearly proved, both by experiment and by resorting to the same means which put me in possession of the fact. I have dived at least an hundred times from a boat moored in the channel near the buoys, and when at the bottom, with my eyes open, I have *invariably* seen myself drawn inwards towards the Bay, nor can I call to mind a single instance where the under-current set outwards or in the opposite direction.

I am well aware that the surface or upper current will often run out of the Bay, while the under current is running in, for this I have seen a minute after coming to the top of the water; neither will I deny, that occasionally, just after an easterly or south-east gale, when the waters of the Lake are driven up towards its head, and when the Bay in common with the Lake partakes of this rise; or after a strong S. W. blow, which produces the same effect, that this under-current may be overcome by the pressure of the increased quantity of water in the Bay, and that a reflux current may for a short time be established.

The form or shape of the bar immediately opposite the Queen's Wharf, also proves the steady indraft into the Bay. I have always likened it to a man's foot; the shoal which runs from the N. point of the Island, terminates suddenly near the spot where the red buoy is usually placed, this I have compared to the heel; the northern end of the bar runs parallel with the wharf, and represents the sole of the foot; and the many sandy prolongations which run easterly may be likened to the toes.

To this natural cause, and to this alone, the persistance of the channel at the Queen's Wharf is dependant: do away with this current or lessen its force, by another opening at the east end of the Bay, and in ten years' time the sand would gain such a mastery as to bid defiance to the dredge.

There are many other weighty reasons against making a canal at the S. E. end of the Bay; they are, however, so ably set forth in Captain Richardson's admirable report, that it is quite unnecessary for me to allude to them.

Might it not be desirable to build a short pier of crib work, say two or three hundred feet long, parallel with the Queen's Wharf, and at whatever distance from it to the south that the Harbour Commissioners may deem sufficient for the width of the channel, and upon the ends of which lights should be erected?

This pier would not in any way interfere with the escape of ice in the spring; it would clearly indicate the width of the channel, and for which purpose the present buoys are perfectly inadequate at night; and it could not have any injurious effect in causing the sand brought in by the wash of a S. W. wind from being deposited in any other situation than that in which it now takes place.

Should this suggestion not be deemed worthy of the consideration of the Harbour Commissioners, they should, in common justice to all sailing vessels (more especially strangers) visiting this port, cause to be placed at the narrowest part of the channel south of the Queen's Wharf, either a small beacon light (which might be lighted with gas), or a buoy fitted with bells, and which the action of the water alone would be sufficient to sound.