

marsh, the outlet would be more distant than that at the Humber Bay, consequently the grade of the sewer bottom would have less descent, which is a matter of great importance.

It may be objected to the western course, that the discharge of the sewage into the Humber Bay, would pollute the water outside the island, and thus, in at least a mitigated degree, reinstate the evil sought to be removed. I do not, however, apprehend this occurrence,

The prize report of Sandford Fleming, published in the *Canadian Journal* of 1854, shows that nearly all the rivers discharging into our lakes have bars thrown up in front of their entrances, by which they are deflected from their prior direction, and turn sideways along the coast. The direction of these bars is in a line determined by the conflict between the strongest opposing lake drivings, and the force of the discharging stream; and as all our storms of longest wave fetch, on the north shore of Lake Ontario, come from the eastward, the bars formed tend westward. I am not acquainted with the hydrography of the Humber Bay, but I should expect it to have a bar in front of the river mouth, similar to those at the mouths of other rivers: and if so the direction taken by the entering stream will be westward, and thus any foul water discharged here would be carried so far out into the lake as, in all probability, to keep clear of the south side of the island, or certainly to be so diluted and purified as to be perfectly harmless.

One or two writers in our newspapers have expatiated rather vehemently on the pestiferous emanations escaping from the street sewers, which they believe to be immense cess-pools of detained excrement. I do not believe that any such accumulations exist in any of our sewers in which a uniform and carefully directed grade has been constructed. The asylum main sewer is an oval of 2 feet wide by 3 feet deep. The distance it runs to the lake is nearly a mile. The fall to the lake is not very great, but the whole is equally distributed, consequently the descent is uniform. I have seen this sewer opened at many points, and I never observed the slightest detention anywhere, of the fluids or solids in it.

The most extensive gaseous emanations from our sewers take place when they are perhaps least noted; that is to say, on the occurrence of heavy rain, or thunder storms, and in rapid spring thaws. At these times a large body of water is suddenly thrown into the sewers, and of course it displaces a corresponding volume of foul air. The water does not drive