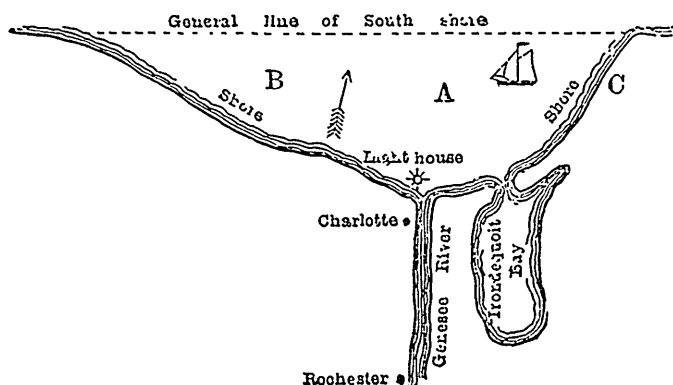


Reverting to my theory of an undertow current in an opposite direction, I may say that it rests on something better than "empty air." I was fortunate enough to meet with a gentleman who assisted in making some observations of lake currents in 1884 and 1885, and he informed me that the floats of a few feet in depth invariably travelled in the direction of the wind, but that the floats over twenty feet in depth always travelled in the teeth of an easterly storm, but he had not observed it to do so in the case of a westerly storm. I should have stated at an earlier period that, in my opinion a wind from the west does not produce an undercurrent in an opposite direction, for the very obvious reason that the outlet of the lake is to the east, and when the water is blown down the lake it makes its exit by the St. Lawrence instead of returning as an undertow.

But I have better evidence still than the above. Some two months ago I explained this theory in a newspaper article, and in response to it I received the following from an eminent American engineer. And I trust he will not consider it a breach of confidence if I give it in his own words. "I was greatly interested in reading your article in the *Globe* on 'Lake Currents,' and perhaps you will be interested in the following facts which were communicated to me by the captain of a life saving crew at Charlotte. The shape of the lake shore is as sketched. A



yacht capsizes at A during a severe westerly gale, the ballast shifts to the bow, leaving the stern rising out of the water so as to form a float. Despite the heavy wind and surface currents tending to drive the yacht to C, it was observed to travel slowly westerly in the teeth of the wind and found a few hours later at (B)! As you describe it, the water was piled up along the shore at C, and by the head so formed a portion ran backward as an undertow towards B, thus making a temporary whirlpool. This is due to the peculiar shore conformation, and the sewage problem