

mestic water supply. It is a matter of indifference to the company (from a financial standpoint) whether the city continues to pump diluted sewage from Toronto Bay or adjacent portions of Lake Ontario, or buy water from the company. If the company supplies the water to the city's reservoir, the people will have pure water at higher pressure, which means lower fire insurance rates, and the increased volume of cheap water would enable the city to keep its sewers constantly flushed. But if the city prefers the present system, the inexorable laws of commerce must compel it to apply to the company for cheap and reliable pumping power.

Lake Simcoe water, notwithstanding all that has been said to the contrary, is of the highest quality for domestic purposes, and if it were not, the best medical authorities claim that sixteen miles flow, exposed to the sun and air, would purify almost any water. If that be so, what could be purer than the quality of Lake Simcoe water after flowing thirty-five to forty miles through an open duct. If that should be deemed insufficient, the domestic supply can be filtered by gravitation through specially constructed sand and gravel beds at high altitudes at a trifling cost; the water can thus be delivered into the homes of the people absolutely pure and free from the remotest suspicion of taint. This feature of the company's enterprise will take care of itself.

Toronto occupies a position in relation to this enterprise that cannot be duplicated in the universe. True, there are watersheds as great or greater than ours, but during the great freshets the water flows to waste for lack of a natural reservoir like Lake Simcoe, but if the reservoir and the supply be found together, they are invariably remote from market, and the power, after being produced at great cost, must be transmitted to distant points for consumption, which entails enormous waste.

Since the dawn of the electrical era the Niagara Falls has been generally regarded as the ideal water power of the world, but let us contrast it for a moment with the enterprise under consideration. The Niagara Falls Power Company have already expended over \$4,000,000, and to complete their present undertaking it is estimated that it will cost fully as much more, as the whole work has to be done in rock. The company will then be able to develop 100,000 horse power, the greater part of which will have to be transmitted to a distant market at a loss of fully 20 per cent. By the Lake Simcoe Aqueduct over 500,000 horse power can be developed within six miles of the point of consumption, and this result can be achieved at a fraction of the cost of the same volume of power by Niagara waters. It would cost the Niagara Falls Company \$40,000,000 to produce that amount of power, judging by the cost of their work up to date.

The Niagara Falls Power Company, recognizing the enormous value of water power as an electric developing force, have not alone invested the large amount of capital as above stated, but entered into an agreement to pay to the Province of Ontario \$35,000 per annum for ever, for the exclusive right to construct a hydraulic tunnel under Queen Victoria Niagara Falls Park, which charge represents a capital of one million dollars at 3½ per cent. Lake Simcoe, with the waters that can be made tributary to it, can furnish power far in excess of any controllable energy capable of being developed at reasonable cost from the waters of Niagara, nearer the point of consumption, and at a mere fraction of the cost.

It is not claimed that Lake Simcoe can at all com-

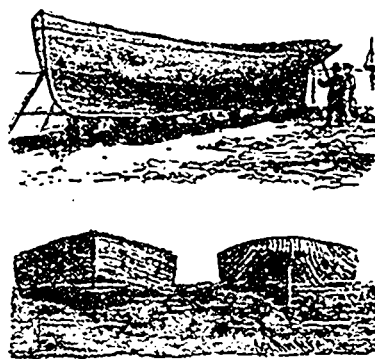
pete, in point of volume, with Niagara Falls, but the former has an altitude (or fall) three times greater than the latter, hence one pound of water from Lake Simcoe will do the work of three pounds of Niagara water. Besides, every ounce of Lake Simcoe water can be easily and cheaply harnessed and made to do duty, whereas it is generally admitted that only an infinitesimal portion of Niagara power can by any possibility be utilized.

Let it be understood that the Lake Simcoe project is in no sense a rival to the Niagara Falls undertaking. Humanity has need of all the power that can be exacted from both these giant slaves of man.

If any further evidence of the value of the company's franchise were wanting, it is supplied by our bitterest opponents in the Legislature, as will be seen by the following extract from the *Toronto Globe's* report of the proceedings of the Provincial Parliament, April 21st, 1894:

"The House then took up Dr. Gilmour's private bill to incorporate the Georgian Bay Ship Canal and Power Aqueduct Company. The bill occasioned a very interesting discussion. The Commissioner of Public Works, who had apparently been waiting all the afternoon until this order was called, led the attack on the bill. For the purpose of the construction of the aqueduct the bill proposed to invest the company with enormous powers. It gave an actual monopoly of water power and water fall over a large section of the province. There was danger, he said, of the bill resulting in the creation of a great corporation on this side monopolizing as much in its way as the Standard Oil Company had done on the other side. He did not feel well enough to discuss the subject very much, but he thought it right to warn the House of what he considered to be the dangerous nature of the bill. The company, by the passage of this bill, would be invested with a monopoly of enormous privileges over the territory affected by it. He knew of no company in the Dominion with such enormous powers as it was proposed to give this company."

#### IMPROVEMENT IN VESSELS' HULLS.



The accompanying illustrations represent an improvement in the hulls of vessels designed to afford the maximum of speed and safety, while the construction is such that drift to leeward will be in a great measure avoided. The invention has been patented in Canada, Great Britain and the United States by the Rev. Patrick O'Brien, of St. Patrick's Deanery, St. John's, Newfoundland. The bottom of the vessel is curved in convex form from the stem to the stern, and has a concave face from the keel to the sharp-edged bilge, while from the bilge to the top of the hull the sides are curved, presenting an outer convex surface at the stern. The small figures represent bow and stern views. In every