# The Canadian Engineer

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# The Canadian Engineer.

BY THE CANADIAN ENGINEER COMPANY IN THE INTERESTS OF THE MECHANICAL, ELECTRICAL, MARINE, LOCOMOTIVE, STATIONARY AND SANITARY ENGINEER: THE MANUFACTURER, THE CONTRACTOR AND THE MERCHANT IN THE METAL TRADES.

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W. G. BLACKGROVE, secretary of the Canadian Association of Stationary Engineers, is authorized to act as sgent for THE CANADIAN.ENGINEER in the city of Toronto and vicinity.

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This is to certify that we have printed and mailed TWO THOUSAND copies of THE CANADIAN EN-GINEER for the month of July.

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Toronto, August 1, 1893.

### TRADE DEPRESSION.

Such a sudden and general collapse has never lwen known in the history of manufacturing and trade in the United States as has occurred during the last month. Every branch of business, from the railways down to the most obscure manufacturers, have been affected. Cotton mills, iron and steel works, mines, wood-working establishments, and in short, factories of all classes, have closed down, throwing thousands upon thousands of people out of employment. Of course there is no essential reason for this, in the face of a plentiful harvest, and it can only be described as a panic resulting from the silver trouble. Now that the strong hand of Cleveland is felt at the helm, and when the Sherman law is repealed, confidence ought soon to be restored, and business revive almost as quickly as it collapsed. In fact there are already signs of returning confidence in the resumption or prospective resumption of many of the idle establishments. If, however, the panic should be long continued, it is idle to blind ourselves to the fact that we in Canada may get the backwash of the trouble, for two reasons: one is the invasion of the country by unemployed skilled workmen, and the probable lowering of the standard of wages, and another is the exportation to this country of surplus stocks which would not find an immediate market in the United States. These stocks would no doubt be sold at slaughter prices here

and thus would introduce a new and unwelcome element into competition. It is to be hoped, however, that these troubles will be avoided on this side by the early restoration of business faith in the United States.

## A SUGGESTION FOR HAMILTON.

There was much talk during the past spring of a company, with headquarters at Hamilton, to furnish both electric light and power to that city and intermediate places, the power to be derived from Niagara Falls, and transmitted by large cables of copper wire. The Siemens-Halske Co., of Germany, were to put in the plant, but so far the stock subscribed is not sufficient to enable the promoters to go on with the work. THE CANADIAN ENGINEER gave the opinion of an electrical expert, that the practical success of the scheme would be doubtful, and though other experts have since given equally confident opinions of its feasibility, the fact remains that hitherto no transmission of electrical power such a distance, 35 to 40 miles, has yet been accomplished on a commercial scale, or so far as we know, even experimentally. There is no doubt the thing can be done, but in the present state of the science, will it pay? That is the unsolved problem. If the great German firm are sure of its success, why do they not take stock in it, or build it themselves?

We have a suggestion for the people of Hamilton, by which they can bring a small Niagara to their own doors, thus solving their power problem and that of their future water supply at the same time. The distance from the top of the Hamilton mountain to Lake Erie is under 30 miles. If a canal were dug from Lake Erie to Hamilton, the city would have an exhaustless supply both of pure water and electrical power and light. The water from Lake Erie is the same as that now pumped up at great annual expense from Lake Ontario, and the supply of which is already too limited for the present reservoirs and pipes, so that once the canal was completed, the annual cost of water for the city would be a mere triffe in comparison.

As for power, we have only to mention that an electrical engineer estimates 10,000 horse power as the amount which could be taken from the water-power of the Welland Canal without affecting the commercial service of the canal in any serious degree. Now the height of the Hamilton mountain is such that ten or more dams or reservoirs of power can be built one under the other from the outlet of the canal, affording say 100,000 horse-power. This very water can be used direct from the lower dams for the city's supply, and its quality would only be improved by the aeration it would receive in its fall. The possession of such an enormous supply of electrical energy, which the city could keep under its direct control, would start Hamilton off on such a manufacturing boom as its citizens have never yet dreamt of. The sale of electric power and light, and the saving in the annual cost of pumping, together with the saving of machinery and reservoir, etc., which would have soon to be built under present conditions, would more than pay interest on