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The Canadian Engineer.

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MONETARY TIMES PRINTING CO. OF CANADA (LIMITED).
Per A. W. LAW, Sec.-Treas.

Toronto, January 1, 1894.

THE records of the shipments of iron ore from the Lake Superior district for 1893, show that 5,837,000 tons were shipped by water during the year. The amount shipped by all-rail routes would bring the total up to about 6,000,000 tons, or only two-thirds of the amount shipped in 1892. Notwithstanding the depressed condition of the trade, and the remarkably cheap production recorded by the new Mesaba range of mines, the peculiarities of which have been described in this journal, and whose competition has made it hard for the other mines—still, the outlook for the coming spring is more encouraging than was anticipated three months ago.

A PROCESS of making pipes of cement and iron is now being tested in France. A framework of iron is imbedded in cement and mortar. Bars of an I section are used, which are rolled as long as possible and then wound into a helical form, the pitch of the helix being determined by the section of the iron and the pressure to be withstood. Tanks are also made on the same principle, the pitch of the helix being lessened at the bottom, where the pressure is greatest. The coefficient of the expansion of iron and cement being about the same, no trouble is experienced from changes of temperature. The cement protects the iron from rust.

THAT the partial collapse of the iron market in the United States would lead to exportation at prices hitherto unheard of in the American trade, was only to be expected, and we see that it is actually taking place, as the Louisville and Nashville Railroad is quoting through rates on iron from Anniston, Ala., to Derby, Eng. The *Iron and Coal Trade Journal* of London views such competition with alarm, and while acknowledging that present figures are panic prices, points out that in the United States events move rapidly, and it is not safe to assume that the figures of yesterday are equally applicable to the present time. There can be no doubt that our American friends have done a great deal of late years to cheapen the cost of production. They have worked for unprecedentedly large yields, reduced the consumption of fuel, cheapened the tonnage cost of labor, secured more economical supplies of iron ore, and made arrangements for cheaper transport, and none of these movements have yet reached finality. The cheapening of production is now the watchword of American furnace practice. Fuel is much cheaper to-day than it has ever been in the industrial history of America, and it can unquestionably be sold in Pennsylvania and Alabama, with a profit, at a lower price than in any other part of the world.. Having invested their capital so largely in the iron industry, American blast-furnace owners are likely to seek for foreign markets at any price, if they cannot find enough to do in their own.

IN a letter to the *Empire*, Wm. Hamilton Merritt, of Toronto, argues ably in favor of starting a steel rail industry in Canada. The deputation of street railway men who waited on the Government asking that rails for street railways be placed on the free list, as steam railway rails are, had reason on their side, but what Mr. Merritt, besides many others connected with the Canadian iron industry, maintains, is that both classes of rails should pay duty in order to develop a steel rail industry at home. In the course of his letter he says: "The United States, through a vigorous treatment of the iron and steel question, is ready for free trade in those articles to-day. We have not even formed a policy to bring them into existence to any extent, for with 'free steel rails' in the nineteenth century, it is impossible, unless a bonus system were adopted, or, indeed, unless the great interests which have brought about 'free steel rails' were compelled by the Government to lend their aid to the operation of steel making in Canada. If that were done, 'presto,' like magic the iron and steel industries would blossom like roses in Canada, and we should have a million more people in our midst. The street railway combination, which controls Montreal, Toronto and Winnipeg, and what other places I know not, is really, indirectly, an offspring of 'the Government' on wheels,' as the Yankees call the C.P.R. Why should not this great corporation have another offspring in the shape of works to smelt and roll their steel rails? As an indication of the importance of steel rails as a raw material, I would draw attention to the fact that in the fiscal year 1891-2 we imported 68,918 tons of pig iron, valued at $886,485, and 83,000 tons of steel rails (free), valued at $1,738,661. If the Government decided it was a good policy to create iron and steel smelting in Canada, instead of having $12,000,000 a year imported, why should not the combined interests of the C. P. R.,