

were in the healthy condition it should be in, and would be in if the duty upon pig iron was sufficiently high. It might be that for a while, under considerably increased duties, the prices of iron goods would be slightly advanced, but only slightly, and this only until the effect of the increased duty would become worked out in the establishment of blast furnaces, with sufficient capacity to supply our requirements. As soon as this was accomplished prices would recede, and, no doubt, not only pig iron, but all the other commoner forms of iron, would be as cheap in Canada as in the United States.

In another page will be found an article from the *Canadian Mining Review* regarding the prospects of the possible extension of the charcoal pig iron industry, in which it is quite clearly demonstrated that the manufacture of charcoal iron for subsequent conversion into steel is perfectly feasible, and would be very profitable. And the same may be said of coke iron. We know that the iron made in Canada is of very superior quality: and what is now being done on a small scale could be done on a much larger one. There are immense deposits of iron ore lying between Lake Ontario, Georgian Bay and the Ottawa river, and also north of that river in Quebec, which can be mined very cheaply, and contiguous to all these ore beds charcoal can be had in abundance. This region embraces a very large proportion of the iron consuming manufacturing industries of Canada, and, of course, iron made in this region could be delivered to these consumers with much greater facility than from any point in the United States. Sault Ste. Marie and Port Arthur, on Lake Superior, are as favorably situated for the manufacture of pig iron as corresponding points in Michigan, Wisconsin or Minnesota. The ores in that portion of Ontario are of identically the same character, and in equal abundance; charcoal fuel is also quite as available, and if coke is required, the facilities of transportation for it are quite equal to those on the American side. If furnaces were erected in Toronto, it would be found that the distance from the most available ore beds is not half as great as that between Chicago and her ore sources; and the distance from the Connellsville coke ovens to Toronto is not as great as to Chicago: and Chicago has one of the very largest and most successful steel plants in the world.

As to the desirability of Canada increasing the duty upon pig iron. In 1860 the United States had not adopted a protective policy, and the production of pig iron there in that year amounted to only 919,770 tons. But as soon as a high duty was imposed upon the article the industry began to flourish, and in 1873 the production was 2,868,278 tons—an increase of more than 200 per cent.; and in 1882 the production was increased to 5,178,122 tons. This was a wonderful advance, but the increase in output from 1882 to 1890 was phenomenal, the output in the latter year being 10,260,000 tons. High tariff did it. Canada is reaping some of the benefits of this large production of pig iron in the United States in that about forty per cent. of all her imports of manufactures of iron are brought from that country. Free trade Great Britain scarcely sells us as much. Under high duties in the United States the production of iron has increased to a point where that country stands ahead of even Great Britain: while the per capita consumption there, as compared with that of Canada, is 134 times as much. Under a low tariff in Canada but one pound of iron

is consumed to 134 pounds in the United States under a high tariff.

It has been estimated that, excluding all the iron and steel entering into such products as cutlery, surgical instruments, fine edge tools and similar articles, the requirements of Canada implies the consumption of a million tons of iron ore and 3,000,000 tons of fuel; and this would be the equivalent of the output of probably thirty blast furnaces. Consider what this means—the large number of men employed in mining ore, in burning charcoal, in making coke, in quarrying limestone, in transporting these materials to the furnaces, and in carrying the products away: of the millions of money invested in these furnaces, and of the other millions invested in steel plants, foundries and other iron-working establishments, and of the thousands of men to whom employment would be thus given.

It is evident that if Canada is ever to become the producer of the iron and steel which she consumes, it can only be done by such means as have placed the United States on the proud eminence of being the greatest iron manufacturing nation on earth. As it is, the system of bestowing a bonus upon the production of iron is a delusion, which has failed utterly to do what was expected of it. As it is, the duty imposed upon imported iron is for revenue only—it is not a protective duty. The only hope for the successful establishment of the pig iron industry in Canada is in increasing the duty.

DEPARTMENT OF MANUFACTURES.

It has frequently been shown in these pages that an imperative necessity existed for the establishment of a Department of Manufacturers as an active element of the Government of Canada. We doubt the ability of any officer of the Government or of any one else to advance even an approximate idea of the capital invested in Canadian manufacturing industries, or the number of persons who find employment in them; and by the same signs it is impossible to give an intelligent guess at the value of the output of these industries. We find the statistical bureau giving us from time to time what it calls the value of the "manufactures" exported from the country, but we know that the absurdities of these statements would be laughable if it were not that they place the manufacturing industries of the country in a most ludicrous light. According to these so-called "statistics" our exports of manufactures amount to only about six per cent. of the whole, but as we have shown, this amount should be very largely increased. Why does this absurd condition prevail? Our statistician evidently considers that his whole duty is done when he tells us that certain exports have been made, and to save himself some trouble and work he classifies them just as other statisticians have done ever since the establishment of his bureau. For instance, he classifies refined copper and salt as the product of the mine; canned salmon and cod oil as the product of the fisheries; potash and pearlash, shingles and garden paling as the product of the forest, and butter, cheese and canned fruits and vegetables as the product of the farm, while all these and a hundred similar articles should be denominated as manufactures, and are such quite as much so as steam engines or pig iron. If it were the deliberate intention of the Government to propagate the idea that Canada is anything but a manufacturing country, that