Iron and Machinery

CANADA IRON MEN FOR PROTECTION.

(Iron Trade Review, Cleveland, Ohio.)

If Canada does not soon enter upon a national policy calculated to foster and build up an iron and steel industry within its borders worthy the name, it will not be for want of a flood of light and literature on the subject. We have referred on several occasions to the cogent arguments of Mr. J. H. Bartlett, of Montreal. Now comes the leading industrial journal of Canada, the *Canadian Manufacturer* (Toronto), with a plea for Protection for its own sake, and not for revenue only. Hear it:

"Canada imports every year large quantities of charcoal iron, every ton of which could be and should be made at home. Our advantages for the economical production of charcoal iron are certainly not surpassed, probably not equalled anywhere else in the world. It so happens that in Ontario, where the iron ore is, the material for charcoal is too, and in quantities practicably inexhaustible. For, in the rough, rocky districts, where iron ore most abounds, and which are of no use for agricultural purposes, the timber growing there, if all taken off, would soon be replaced by a new growth, provided only that cattle and fire be kept out. But besides our import of charcoal iron, we bring in from abroad ship-loads and car-loads of iron of other and inferior kinds. Now, those who ought to know do say that, were we for many important purposes to use Canadian charcoal iron, instead of this inferior imported iron, we should be gainers every year to a large amount by the change. The country would gain by using its own charcoal iron, worth $10 a ton, instead of inferior iron brought in from abroad, at $20. Be this as it may, however, it is surely the merest folly for us to continue sending money out of the country for charcoal iron, when we ought not only to be making all we want ourselves, but also a surplus for exportation.

"But there is something in the way that stops us: there is a lion in the path which appears to us so terrible that we dare not advance. The old free trade superstition still throws its baleful shadow across the land, and hinders us from doing many a thing that we might easily do did we but know our own strength, and did we understand what our opportunities really are. Had we the courage to put upon all imported iron specific duties, calculated on the basis of twenty-five per cent. of the value, we should in a few years afterwards find ourselves nearly independent of imported supplies altogether."

The Montreal *Star*, too, is of the decided opinion that duties on iron and steel "must be high enough to insure a home market to the Canadian manufacturers of iron and steel, or it will not be effective." "A half policy," it is convinced, "will probably prove a failure." These remarks are called out by a report that a special agent of the Dominion Government had recently visited the iron districts of Pennsylvania with a view to obtaining information which should aid the authorities in framing a new policy of home protection. The fear that the new policy would not go far enough inspired the *Star* to give out the above note of warning.

Whether Canada has all the elements for the successful manufacture of iron and steel within her own confines at an economical figure remains yet to be demonstrated; but if we are to believe reports of experts regarding the deposits of iron ore recently developed in Peterborough and Haliburton counties, the problem need not long go unsolved. A recent brochure prepared by the Secretary of the Bureau of Industries (for a copy of which we are indebted to Mr. T. D. Ledyard, of Toronto), referring to these deposits, makes the following statement as to the probable cost of making iron in Canada:

In proximity to these deposits are generally tracts of hard wood from which charcoal could be obtained as cheaply as on any part of the continent; limestone for flux is plentiful, labor is cheap, and many of the mines are easily accessible. These are important advantages for the local manufacture of iron and steel. In the opinion of competent authorities a furnace, having its own ore property, and being conveniently situated, should be able to obtain its ore at a cost of not more than $1.25 per ton. With the latest improvements in charcoal blast furnaces, seventy bushels of charcoal will smelt a ton of pig iron, the whole cost of which will not then be over $10 a ton. Even with iron at the very lowest this leaves a large margin for profit. Then by adding Clapp Griffith converters to the furnace, this pig iron can be converted into steel ingots at a cost of $4 a ton additional, making a marketable article of steel at a cost of $14, the present selling price of which is $35 per ton, and for which there is a large demand."

Certainly, if the Dominion Government can satisfy itself that the above statements are approximately true, it would be the height of folly for it to maintain for a single day longer a policy so inimical to its own best interests as that which now prevails. Nor would the United States, even though a large exporter of iron and steel to Canada, have just reason to complain should the latter country follow in a line of policy which we have found so satisfactory and successful.

EXTENDED USES OF STEEL IN CONSTRUCTION.

The *American Manufacturer* has the following in its English correspondence:—

Evidences all point to the circumstance that before many years are over steel sleeper manufacture will be largely extended at English works. An important field for the steel sleeper, apart from railway construction, lies in the direction of colliery and ironworks tramways above and below ground. Prominent among the firms who are pushing the colliery sleeper business are the Tredegar Iron and Coal Company, Limited, and this week they have exhibited for the first time (on the Staffordshire iron trade exchanges) their new corrugated sleeper for these special purposes, which I was able to inform you a month ago they had patented.

A NEW CORRUGATED STEEL SLEEPER.

The sleeper has been patented by their general manager, Mr. James Colquhoun, and when intended for underground colliery tramways weighs, with its two steel keys and clips, only 16½ lb. For surface tramways the size and strength is increased. The corrugations are deep, and extend on each side throughout the entire length of the sleeper, which has also stamped in it two projecting fangs, at either end of which enable it to become very firmly attached to the ballast, thus preventing any movement when loads are passing over sharp curves. The cost of the new sleeper runs to no more than one shilling apiece, which makes it much more economical, considering the cost of maintenance, than a wooden sleeper.

NEW STEEL RAILWAY CHAIR.

The steel sleeper business has brought a new steel railway chair just now to the front. It is the invention of Mr. Thomas, C.E., of the Brecon and Merthyr railway, and railway men speak highly of it, particularly for its extreme simplicity.

IRON AND STEEL FOR SHIPBUILDING.

The Institution of Naval Architects have this week been holding a conference in Liverpool, and have been advancing views and making recommendations which are encouraging to the makers of steel and iron for shipbuilding. A fleet for the carrying of petroleum in bulk must, it was urged, be at once started by the British shipbuilders for carrying the Russian and American product. Next there must be fast transatlantic exclusively passenger steamers with twin screws, triple expansion engines, and forced draught appliances. That the conference will promote reforms in the commercial steam navy of