

satisfy themselves as to the truth of my statement. In a four-ton cast of scrap the loss would be 30 per cent. or 2,400 pounds, which at \$10 per ton would mean \$12. In my process the loss does not exceed 5 per cent. often not over 3 per cent., but say 5 per cent., which means a loss of 400 pounds or \$2, showing a balance of \$10 saved in the raw material alone aside from the superior quality of the metal, and this important fact is now made public for the first time. These are facts that can be proven, and it is facts, proved facts, the public wants now-a-days."

"You claim, Mr. Doherty, to be able to produce by your process a superior quality of iron; have you had it practically and thoroughly tested, for instance, as to its warping resistance?"

"I have fully tested the warping resistance of the metal during the past six months by making furnace doors, grate bars, etc., for steam boats of it, the result being the castings have stood the heat well. In cases where common cast-iron never lasted over two months before it has stood the whole season through and is apparently good for another season yet. We have been using it now in our foundry for nearly a year, and as a result we are making castings out of De Carbon Steel to be used in machinery, where cast steel had to be used before to get the strength required for the purpose."

He also stated that it has already been adopted by four large foundries in the United States, and others have made application for it. Being asked if he had objections to stating the nature of his discovery he at once said he had not, but that it was so difficult to put it into language understood by the average reader on account of the chemical terms which had to be used that he did not think it would prove interesting or of sufficient account to go into it, but if any person interested would like to have it explained and would write him or call at his foundry in Sarnia he would go into it fully with them. He further said: "You might also say that, in addition to the saving of 25 per cent. in the raw material, it affects a further saving in milling, mounting and shipping. In these various operations there is always a large loss through breakage in a stove foundry. Since we adopted the new way we have had very little loss from this source and have had to throw away no castings so hard that they could not be drilled or filed."

A CANADIAN STEEL INDUSTRY.

COMMENTING on an editorial in the Mail and Empire on the Canadian iron industry, Mr. Wm. Hamilton Merritt, who has shown a very active and intelligent interest in the subject, has written as follows concerning a Canadian steel industry, which he thinks has been sadly neglected, for, to quote his words: "With free steel rails a complete iron or steel policy is impossible." In Mr. Merritt's judgment the country is suffering a loss under our present iron (or free steel rail) policy, and as proof of this he produces the following figures, and comments:

To the railroads:—

On account of 2.4 tons of ore at 60c. from mine to lake port.....	\$1.44
On 1.5 tons of coke at 80c. from Suspension Bridge to furnace.....	80
On limestone .5 ton at 55c. from quarry to furnace.....	28
On .8 ton of coal at 80c. from Suspension Bridge to furnace.....	64
To the lake carrier:—	
2.4 tons of ore at \$1 from lake port to furnace.....	2.40
To labor:—	
On 2.4 tons of ore at mine at \$1.....	2.40
On limestone .5 ton at 35c. at the quarry.....	17
To laboring and manufacturing:—	
1 ton at \$3 per ton.....	6.00
Total.....	\$14.13

If we obtained our coal and coke from Nova Scotia instead of purchasing it from the United States, we would then add:—

On freight by vessel (allowing for lower railway rates)....	\$ 2.50
On coke and in mining 1.5 tons at \$1.50 at the ovens.....	2.25
On .8 ton of coal at \$1 at the mine.....	80
Total.....	\$19.68

Over and above this amount of, say, \$20 there are other expenses, and loss by wear and tear to be met; therefore it will be seen that, after allowing for any profit on the coke, coal, and ore, etc., no margin exists to work on while English rails can be landed on our shores for about \$24 a ton. The makers of the steel rails in the United States are now complaining that, even with their protection of \$7.84 per ton, the western part of their country has been given over to the English rail makers under "the iniquitous Wilson tariff."

Last year we imported free steel—

	Tons.	Value.
Locomotive and car wheel tires in the rough.....	769	\$ 41,858
Rails over 251 lbs. per yard.....	87,467	1,748,660
Steel for skates.....	141	9,768
Steel for hammers.....	67	3,042
Steel for saws and straw cutters.....	432	68,768
Crucible steel for reapers, etc.....	338	23,232
No. 20 gauge or less.....	191	20,109
Sheets for shovels and spades.....	34	2,298
Wire, Bessemer.....	144	8,998
Wire, crucible cast steel.....	277	28,253
Wire for ships.....	124	10,084
Total.....	89,987	\$1,965,070

We would very properly add to the above steel rails for tramways, about 12,000 tons, valued at \$265,334, which, however, paid duty. Therefore we see that about 100,000 tons of steel rails were imported last year—during hard times—the great bulk of which came in free. If we consider that \$20 per ton is lost to the country on transport and labor on every ton, we would be the richer by \$2,000,000 a year if we manufactured our steel rails in Canada.

Besides the steel rails there is also a considerable amount of free steel, as seen in the above list. When these are all added to the other iron and steel articles under the duty list, it will be seen that the amount of deficiency yet remaining to be filled by our own manufacture is very large.

Besides considering the indirect loss in labor which might be employed in the country, we are brought face to face with the fact that a very serious direct drain of from two to three million dollars in gold is going on year by year to pay for steel rails alone, to pay for labor in other countries instead of employing it in our midst, and then some political economists wonder why we have to go on borrowing.