

On the other hand it seems surprising that there has not been a demand from the Allies and from neutrals which would make up for the loss of German business. The natural conclusion is that Germany must have been recently absorbing a very large proportion of the nickel shipped to Europe. Another possible explanation is that the stocks of nickel being usually large any temporary increase in demand can be met without continuing production at a normal rate until the situation clears up.

At present Great Britain, France, Russia and all neutral countries are able to buy all the nickel they want, while the enemy is unable to obtain delivery of what he has already contracted for. No embargo is necessary to maintain this satisfactory condition so long as Great Britain controls the seas.

Canada and New Caledonia, a French colony 900 miles east of Australia, produce nearly all the world's nickel ore. Norway is a small producer. A writer in the "Toronto Star" having made the discovery that the British Empire and France control the supply of nickel ore demands that we should prohibit the export of nickel as it may be used by the enemy for our own destruction. Certainly the Allies have it in their power to do so. Fortunately, however, such a drastic measure is unnecessary and would in fact work more to the disadvantage of the Allies than to the enemy. Manufacturers of armour plate do not want nickel ore in these times. They want nickel and nickel-steel. Obviously there is no sense in Canada putting an embargo on refined nickel for we produce only nickel matte. And if we place an embargo on nickel matte we are simply cutting off one of the sources of refined nickel on which at present the Allies can draw while the enemy cannot. We can hardly hope that Germany will be foolish enough to expect the British fleet to let nickel cargoes pass on to Germany even if they are billed to merchants in neutral countries.

## REFINING NICKEL MATTE

Canada produces two thirds of the world's nickel; but exports it all in the form of matte. The "Toronto Star" wants this attended to at once. We hope that the International Nickel Co. and the Mond Nickel Co. will therefore take steps to have all nickel matte refined in Canada. The "Star" man is very much wrought up over it and if something can be done to relieve him we will be very much obliged. It will have to be done at once, however, and not more than two or three days should be spent in erecting the necessary plant and accumulating the chemicals to be used.

Possibly the easiest way to relieve the "Star" man's distress would be to move the New Jersey and Swansea plants bodily to Sudbury. Perhaps the information that Swansea is in Wales and that the Welshmen have no sinister designs on us might placate him a little. But if that New Jersey plant is not moved to Sudbury very quickly or a similar plant erected there before the end

of the week that "Toronto Star" editor and his correspondent, Judge Barron, will be very wroth.

Canadians would be very much pleased if all our exports were finished products. Nothing is to be more greatly desired. We would like to export armour plate and automobile parts instead of nickel matte; bread or flour instead of wheat; paper instead of pulp; in fact we would like to send out no raw materials. Every industry that we can successfully establish in this country adds to our wealth.

There are many reasons why we continue to export, as do most countries, some of our raw materials. The one consideration that outweighs all others is the market. If we cannot profitably to ourselves establish refining and manufacturing plants to treat all our raw materials here, we export such materials for treatment in plants in other countries. In this respect all countries are alike.

And so it is in the nickel industry. We hope sooner or later to see refineries established here. But we do not expect to see them until some company with sufficient capital to establish such an enterprise becomes convinced that such an undertaking will be a profitable one. Evidently the companies now refining nickel matte are of the opinion that the present location of their plants is the most suitable.

The "Star" is apparently of the opinion that the refineries should be located here whether it can be done profitably or not. While of the opinion that the establishment of plants here should be encouraged we cannot agree that companies should be forced into unprofitable undertakings. In locating a refinery there are many things to be taken into account. Not the least of these are the sources of all the materials needed in treating the matte.

## COPPER SMELTING IN CANADA

Owing to our proximity to the United States, which country alone produces over one-half of the world's copper, the Canadian copper industry seems a rather small one. We are, however, producing, notably in British Columbia, Ontario, and Quebec, no mean quantity, the total for 1913 being 76,975,832 pounds, valued at \$11,753,440.

The smelting of copper ores in Canada was first attempted in 1848 at Bruce Mines, furnace men being brought over from Wales. Since then splendid progress has been made and we now have several plants of large capacity, including two of the finest and most complete plants in the world. A description of these plants and an account of the development of the copper smelting industry is given by Dr. A. W. G. Wilson in a volume just published by the Mines Branch, Ottawa.

In the introductory paragraphs Dr. Wilson says:

"The art of copper smelting is now a well known and well established industry. It is probable that more than 95 per cent. of the metallurgical methods, appliances,