

is discovered or existing sources made more available, and also before some substitute is found for nickel or some process of hardening steel is discovered which would render its use unnecessary. Doubtless nickel can be refined as cheaply in Canada as elsewhere in the long run. But not at once. A big transference of capital is required as well as other factors not immediately available without increased cost for the development of the industry. The experiment is in danger both from every metallurgical chemist's laboratory and also from the nickel deposits of New Caledonia. In reference to these latter what Mr. Whitaker Wright had to say at the meeting of the nickel corporation in London the other day is not without interest. He said:

"The property acquired by the corporation is of great area, and embraces what I believe may be pronounced the most valuable nickel mines in the entire world. The final legal steps for absolutely vesting this extensive area in the company will shortly be completed, after which we shall apply to the Stock Exchange to grant a settlement in the shares. In regard to title, the mining laws of New Caledonia are more liberal than those of any other colony of which I have had any experience—mining property being held in perpetuity without limit of area or exaction of labour condition—and involving only the payment of a nominal annual tax of about 2d. per acre. In regard to the world's supply of nickel, there are only two sources worth mentioning at the present time, one being the Sudbury mines of Ontario, and the other the mines of New Caledonia. The Sudbury ores, containing as they do sulphide of iron, nickel, and copper, the process of refining is complicated and expensive—further, the nickel produced is not of the best quality, as it contains traces of antimony and arsenic, which for nearly all purposes are very injurious when present in refined nickel. On the other hand, the New Caledonia ores, being hydrated silicate of nickel, free from copper, sulphur, or other injurious impurities, the refining is comparatively simple and the quality of the nickel produced is of an exceedingly high grade, being in the greatest demand for all purposes. I feel justified in expressing the opinion that this corporation can produce nickel of the purest quality at less cost than it can be produced by any other company, and that you will, in the near future, practically control the nickel market."

However, so far as regards mining in British Columbia the question of nickel refining in Canada, and still more that of manufacturing wood pulp is of purely academic interest. The success or failure of experimental legislation in these connections does not directly affect British Columbia. But it cannot be too carefully borne in mind that if experiments in reference to nickel and wood pulp are successful, they will not owe success to the soundness of the principle involved but to the special conditions under which it is applied. Any attempt to impose similar restrictions upon copper and lead would be disastrous in the extreme and doomed to failure from the outset. It would be a very desirable thing to have all the wheat grown in the Dominion manufactured into flour in the Dominion. Until public opinion is ready for this purpose to impose an embargo upon the importation of wheat, it had better refuse to govern its action by the success of an embargo upon nickel ore, in refer-

ence to articles of common production and consumption like copper and lead.

A very interesting question and one that is frequently discussed is whether cheapness of fuel and nearness of fluxing materials or proximity to the ore supply should be the dominant factor in establishing a smelter at any particular point. Of course they are all important factors. Where they can all be procured there can be no question as to the suitability of such a locality as a smelter site. But if one point affords greater proximity to the ore supply, while another affords cheaper power and cheaper fuel which of the two will enable the cheapest smelting to be done. Local point has been given to this abstract question by the rivalry existing between Grand Forks and Greenwood as to their respective merits as smelting centres. The point made in favour of Greenwood by Mr. Paul Johnson is that with the Crow's Nest coal fields to draw from for fuel, the cost of generating power is not nearly so great as might be supposed, while on the other hand, Greenwood is in the centre of the mines all or nearly all of which possess a straight down-hill grade to that point. In his opinion that counterbalances the generation of power from the vast reservoir of power contained in the North Fork of the Kettle River. It may be said in passing that this is a tribute to the immense advantages derived throughout the mining districts through the possession on their eastern borders of this practically inexhaustible supply of coal and coke. That steam power can be generated so easily and so cheaply in any part of the Kootenays touched by the Crow's Nest Pass Railway system is certainly a boon to the smelting industry, but it is a much greater boon to the mining industry. There is no part of the world where such perfect natural conditions exist for the economical mining and treating of ore of all kinds. Not only is there abundance of water and abundance of timber, but there is abundance of the best possible fuel provided by nature in close proximity to the mining districts. The great stimulus given to the production of wealth by the connection of these coal fields with the mines is only now beginning to be felt. It will be years yet before its full significance is realized. It has been the fashion for everyone to turn their eyes to South Africa, the Transvaal and Rhodesia. But what, when we look at the matter in our sober senses, can possibly be made of these countries in comparison with British Columbia? They, neither of them, contain the conditions of prosperity and growth which prevail in British Columbia. Gold is all very well and the Rand contains the greatest goldfields in the world. But silver, lead, copper, iron and coal play a greater part in the consolidation and progress of a country. The very scattered and promiscuous nature of British Columbia's mineral deposits, while it has been a bar to its rapid exploitation, is in itself a guarantee of future stability and permanence. But to return to our original subject, it is probable that proximity to the supply of ore is the determining factor in establishing reduction works in British Columbia, because the country is so favourably endowed in other respects that almost all points are equally situated in respect of fuel and power. Consequently for dealing with the ore of the Mother Lode and other points Mr. Johnson's sagacity was not at fault in locating his smelter at Greenwood. But it by no means follows from that that the Granby Smelting Company have placed themselves at a disadvantage in locating at Grand Forks. It must be remembered