

process other than smelting. As the result of our experiments we have secured a mill at Silica, on Sheep Creek, a few miles from Rossland, which we have reconstructed and enlarged to a capacity of about 100 tons a day. It is not intended to use this mill for anything except experimental purposes, as a guide to us in erecting a larger mill, of a capacity of 500 tons or more per day, which mill we propose to erect next spring. I think that I can safely say that \$5 ore may be treated by milling at a profit. For reasons well known to mining men, high-grade ores can generally be more cheaply treated by smelting. I am satisfied that in a few years we shall be able to treat \$4 ore at a profit."

"How much do you propose shipping now?" Mr. Blackstock was asked.

"Under our new contract the two mines are to deliver 12,000 tons a month of high-grade ore, and as much more under the \$9.50 limit as they choose, which will probably be from 6,000 to 12,000 tons a month more. We have not shipped in any quantity since the strike of a year ago last July, but have simply been making shipments from time to time of ore encountered in development, and also shipments to test certain ore bodies. I would like to emphasize the fact, however, that we have never ceased operations, whether we shipped or not. At the time of the strike 500 men walked out, but since then we have had 250 men working on development work continually. I expect in a few weeks we will have fully 500 men employed again. The labour troubles out there, I think, are settled."

"You can hardly speak yet of dividends, I suppose?"

"No, except to say that it will be some time before any are paid. The fact, however, that we will be making profits right along will afford a good deal of encouragement to shareholders. I am confident that we are on solid ground now, and getting to a basis where we shall be able to save something from the low-grade ore, as we pass through to richer ores. The truth is that nobody understood the nature of these mines nor the way their ores had to be treated. It has fallen to us to be the pioneers in that respect."

## VANCOUVER AS A MANUFACTURING CENTRE.

(By G. A. Walkem, B.Sc.)

THE City of Vancouver has in the last thirteen years become one of the first cities of the Province of British Columbia. About thirteen years ago a fire swept over the then small town completely blotting it out, but this disaster proved a blessing in disguise, as the city grew on new and modern lines to the proportions it has now attained.

Situated on the Mainland, on one of the finest tidewater harbours of the world, at the end of a great transcontinental railway, the City of Vancouver possesses advantages which should place it in the first rank as a manufacturing city, of such manufacturing as it is possible to do on the Coast.

The city has for its size a large number of industries, among which the largest and most important and rightly so, is the lumber and sawmill industry.

The mills owned by the B. C. M. T. & T. Co., by Tait, by Robertson & Hackett, the Pacific Coast Lumber Co., and others, do an immense business in this line, and these mills, besides the various shingle mills of the city, have at the present time to keep operating night and day to fill orders. The question of how long the supply of timber will last is one of vital importance to these mills, and to Vancouver. Already there is a scarcity of logs and other means have to be resorted to to get the logs out of the woods than were employed ten years ago. It is probable, however, that the supply of logs will be sufficient for a good many years to come, and that the mills will add to Vancouver's prosperity for a considerable time.

After the timber in importance comes the iron industry. At the present time there are four or five works in Vancouver which manufacture and repair machinery of all kinds. The problem of manufacturing on the Coast is a very difficult one. Even in San Francisco, an old city as compared with Vancouver, I do not think it is too much to say that 75 per cent. of the machinery used, is shipped in from the East, and that the machinery manufactured is machinery whose weight or bulk prohibit it being brought from the East, with the present means of transportation, or that it is manufactured for local work whose peculiar conditions demand it, such as placer mining, etc. It is the same in Vancouver or any of the Coast cities, so long as the raw supplies are brought from the East we will be seriously handicapped. The Vancouver manufacturer has to confine himself to the manufacture of things for which there is a local demand, and because of his proximity to his market to try and attain the perfection in these lines which the Eastern manufacturers cannot. The Eastern manufacturer's market is so much larger that he can build from 20 to 100 machines where we on the Coast will build one, and has a great advantage, and this combined with the lower wages paid to mechanics in the East, more than offsets the difference in freight rates of 80 cents per hundred on the raw product and \$1.30 on the finished. I think, however, that notwithstanding all these things, should the labour unions not be too exacting in their demands, there is work enough in Vancouver for two or three iron working establishments.

The mines of the Province use a large amount of supplies which can be transported round the Horn, and these are transhipped at Vancouver. It is true that Vancouver does get an advantage in the raw material that she gets from England as this can often be brought round the Horn at a cheap rate of freight by sailing vessels, and this gives us an advantage over the inland cities which Vancouver should not be slow to take advantage of. Pig iron, bar iron, sheet steel, and other raw products can be thus imported and are manufactured here into the finished article. The Cariboo district has taken a large amount of machinery from Vancouver, such as hydraulic pipe, and other machinery used in connection with the placer mines, and will require a lot more should this district produce gold in any great quantity. Vancouver is catering for this trade lately, and will get more and more of it as time goes on.

The Yukon district is a territory which rightly belongs to Vancouver, but which heretofore has not drawn a fair proportion of its supplies from this city.