

## CORRESPONDENCE.

(With Pleasure.)

*The Editor:—*

Your personal note concerning me in the October REVIEW contains a grain of truth, but several measures of error.

As you are well aware I have all along been connected in a dual capacity with both the American and Canadian Rand Drill Cos. My duties in connection with the American company have of late largely increased, while the business here has reached a stage of development where it does not require my personal attention to the extent that it formerly did. Under these circumstances I expect to make New York my headquarters for the future, but I have no intention of severing my connection with the Canadian Rand Drill Co. On the contrary I expect to continue as engineer of that company and direct its operations as heretofore. I hope to continue to meet my Canadian friends on their own soil in both a business and social capacity, and beg to say to them that when in New York they will always find the latch-string out at 23 Park Place.

Yours faithfully,

F. A. HALSEY.

SHEENBROOKE, Que., 12th Nov., 1894.

## Mining in British Columbia.

*The Editor:—*

One of the best evidences of the inexhaustible richness of the mines of this province is that much of the world's experience is gravitating here and settling down to the work of steady and systematic development. And not only is this experience amongst the arrivals, but the numbers and the capital are coming to make their stand in the gulches and on those mountain tops on which nature has bestowed her richest mineral treasures. The days of placer mining, though limited, have not yet passed away in this country of mountain ranges, deep gulches and golden sands; but modern methods have begun to deal with refractory ore and with the rocks which nature in her convulsions has burned and made obdurate.

The pan has been superseded by the rocker, and the wooden aqueduct has given way to the hydraulic pipe, and the machinery of our boyhood has been superseded by the stamp mill with its great power to pulverize the hardest quartz and thus release the golden treasure from its rock-bound bed. One effect of the superabundance of rich mineral ore is that it sooner or later attracts capital, and this becomes a staying power in the production of wealth. The old complaint that the miners are mere prospectors and do not represent fixed or systematic effort is rapidly disappearing before the steady influx of miners and capitalists who have come to stay, but the work of the prospector has by no means ceased. The field here is yet a large one and the encouragement, compared with that offered by other countries, is by no means small or variable.

After many years of labor in the field Dr. Dawson has concluded this year's work with the deepest conviction that the mineral prospects in the province are very encouraging. As an authority on British Columbia mining matters he is, perhaps, one of the select, because he has given the province most careful attention. He is not given to superlatives, but the summary of his report of the year's work does not admit of any other conclusion than the one that the mining industry of the province has already marked an activity not exceeded in previous years, and that the production, especially of silver, is going to add millions to the wealth of the Dominion.

The ordinary reader is very apt to put down what he hears of mineral development now-a-days to be the dream of an enthusiast, who, tired of the oppression, is inclined to draw fancy pictures in order to encourage the desponding.

He is, however, assured on authority which men have everywhere learned to respect, that the mining activity of the province is by no means a vision of the dreamer, but a reality, and that the recent shutting down of the Kootenay mines has only been a pause for breath, during which smelter and concentrating works have been erected for reducing the ore on the spot.

One of the pleasing features in this respect is to note the way in which Canadians themselves are taking hold. In the past the Canadian yielded too readily to others. He gave way to the Englishman or the American, as though these always possessed more experience than himself. He has since learned to use better judgment, to give way only when fairly over-matched.

I have in memory a picture that was presented to me a short time ago by a man who was working a rocker on the Fraser near Yale. Said he: "Do you see those pieces of plant lying around loose on the banks of the Fraser? They are the remains of a plant sent out by an English company. The plant cost about \$40,000. There was an Englishman in charge and he was so important a person that he stood all day with an umbrella over his head and superintended the locating, or rather the *dis*locating of this plant. He would listen to no one. A suggestion from a practical man was out of the question. Even when offered by an old timer with a fund of experience on the Fraser, and given with the best of intentions, it was unheeded and went the wrong way, because it was gratuitous and well meant. The result may be seen any day, and the uninformed traveler wonders what kind of water works came to grief when this plant was distributed promiscuously along the river banks."

It is a feature in New Zealand mining that English capital is best conducted under Scotch management, though it is by no means to be inferred that all English management of gold mines is capricious and extravagant. The inference to be drawn is rather that Canadians are finding that they have been more or less underrated in the mining field.

The advance which Ottawa has made in this western province indicates the potent and progressive power of the Dominion Government. In the explorations which have been found necessary to secure the introduction of capital and also to secure development, the educated gentlemen of the Geological Survey have done very much to make the resources of the country known.

They have also exercised a beneficial influence in lighting the way for the accomplishment of two great measures which will, doubtless, be sooner or later adopted by the Dominion Government, viz:—the sub-division of freshet-occurring streams and a general system of irrigating dry lands.

So far it has been deemed advisable to begin this series with a brief introductory article. In those that follow the attention of the reader will be called to certain facts which bear intimately on the mining resources as they present themselves in a general way to the observer.

It is not a little astonishing to find that numerous misconceptions prevailed in the early days with regard to the mineral resources of this province. The limit at one time embraced only gold and coal. The rich silver deposits of Kootenay were then unknown, as also were the iron and copper deposits which are now found to exist in large quantities. In the race for gold the prospector has laid bare other

treasures which are both rich and inexhaustible and new areas are constantly entering the domain of his mineral treasure.

It is this constant prospect of new areas which adds interest and value to the mining industries and gives additional interest to the province.

There is an expectation in mining circles which is commensurate with the mining possibilities of the province. It is the reasonableness of these possibilities which gives life, strength and hope to the mining industries of the country. The grazing lands of the province may possess some extent—the agricultural lands may be limited, but the mineral areas are constantly expanding, and as the case is in Cariboo there is a decided tendency to revive a one time activity.

The Canadian geologist regards the province as a great exception from the general rule. He is astonished but not confounded. The prospector camped in the gulch will hail you as you pass, invite you to partake of his grub, hand you some specimens of the latest find and then tell you that, at one time, Nature has furiously kicked up her heels and fairly howled. There never was, he will tell you, before or since, such a fine old jumble as when these mountains "jucked" forth and then stood perfectly still.

Camped, not far from North Bend I met, some weeks ago, a man who was an old timer. He was an Englishman named Louis Johnson. Like most of his countrymen in this country he is warm hearted and would share his last piece of bread with the hungry traveler. After partaking of his frugal fare this veteran handed me some specimens of gold-bearing quartz which he found in the mountains adjacent to North Bend. These specimens were exceedingly rich, but the depth and extent of the lead was yet to be determined. This prospector who has been 25 years in the business in the province was quite sanguine. A great deal of confidence is really necessary if the prospector must succeed. He is undoubtedly a fortune seeker and it does not square with his calling to give way to gloomy reflections even though he never found bed rock or made the "riffle."

To the omnipresent gold, silver and coal in the province, must be added gypsum and mica as articles of commerce possessing considerable commercial value.

In the early days of the maritime provinces during the existence of the Reciprocity Treaty, gypsum from the provinces found a ready market in Portland, Boston and New York. Not a few farmers realized handsomely from this gypsum trade. Its reduction by burning to expel the water and thus make plaster of Paris was an easy process. The American people import not a little of our gypsum now-a-days but its demand in the Dominion is constantly increasing—something close to a hundred thousand dollars being the quantity used in Canada. But of this gypsum more particulars will be given hereafter.

Of mica there are known to be four promising mines, two near the Tete Jeune Cache and two on the Canoe River. These mines are the property of Mr. Louis Victor Bennett, of Kamloops. Mr. Bennett, though quite a young man possesses much of the ability, enterprise and perseverance which are so necessary to achieve success in the mining world. This gentleman has already expended a large amount of money in holding the fort. As mica comes within the mining regulations the duties which have to be performed on its possession in the mines place it beyond the reach of the ordinary speculator.

The property on Canoe River is known as white mica. It is found in gneiss rock. It is also found in diminutive quantities in quartz about ten miles west of Canoe River.

It is found in no less than ten distinct veins heavily laden with the mica. The veins are parallel and they run in a south-easterly to a north-westerly course with a dip to the south at an angle of about 55° and covering a distance of from one mile to one mile and a half in width visible in a north-westerly direction until they again seek refuge in the craggy glacier mountains to the west, a distance of about one mile and a half. The veins measure from 7 to 16 feet in thickness. Writing of this mine on Oct. 22, 1894, Mr. Jno. F. Smith, who has the mine in charge says: "That all the work that had been done was centered on this vein which is about 12 feet thick where it is opened, but immediately below a shale of rock of about 12 feet in thickness is another vein 10 feet in thickness, but I think these will be found to be the same vein on further development. "Nevertheless we continued operations in the open cut previously started from which we took out some fine blocks of mica. As I judge the formation of mica in large blocks is little understood I brought out several pieces of especial interest showing how the mica is formed in the quartz and the class of rock in which mica is found. In our operations, continues Mr. Smith, we found a small piece of very hard and brittle bluish-white stone which may prove to be beryl, some formation of which is precious stone. A few days later a large piece was found. I broke this in two with the intention of bringing it out, but unfortunately I laid it down on a stone and came out forgetting it. Nevertheless I have the small piece first found which will cut glass as easily as a glazier's diamond. We also picked out small pieces of fluor spar blue in caste. Several deposits of black mica were found, all of which can be seen by anyone who may desire."

"Mica is found in as well defined a ledge set in quartz as any other mineral but in wedge shaped blocks from four to ten inches thick at one end, squaring various dimensions. Mr. Smith says each block of the mica found will weigh from 15 to 20 pounds. There are several distinct veins running parallel in these mountains which are strictly the Cariboo range of mountains. These deposits can be traced for several miles in length and about a mile and a half in breadth. There is, he says, equally as much mica here as there is at the Tete Jeune Cache. It does not show so well because there has not been so much work done. We started in the centre location and ran a drift 14 feet from which we unearthed considerable mica of a little different quality, not quite so clear as that from Tete Jeune Cache, but a little rougher and more flexible."

Passing gold, coal and iron mines, Mr. Smith has directed his practical attention to a neglected field.

The demand for mica is constantly increasing and as we have no reason to doubt that our protective policy will give way to a suicidal one of handing over the natural productions of the country to strangers, the interest of Canadian capitalists must center more than ever in the natural resources of the country, especially in this portion of the Dominion. Canadians have been too ready to hand over their mineral treasures to outside capitalists who have often been in no better circumstances than themselves. Mistakes like these will not be made in the future, though the inference is not to be drawn that in these pages any attempt is made to create a prejudice against outside capital. This capital is very much needed, but it is not to be preferred to the home-made article which it has been the practice in mining circles to regard as inferior to the importation.

The constantly widening demand for mica in this country is an incentive to the development of this mineral, and as the proof of the richness of a place may be best determined by the actual field, so the readers of the journal may best realize what the value of this mica is by a sample which will be shortly sent to the REVIEW office.

H. J. E.

KAMLOOPS, B. C., 21st Nov., 1894.