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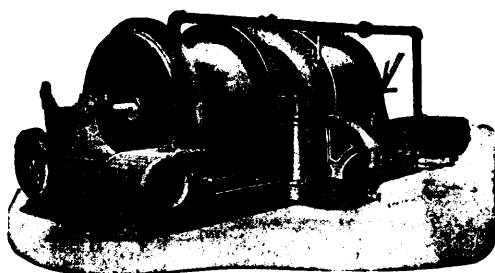
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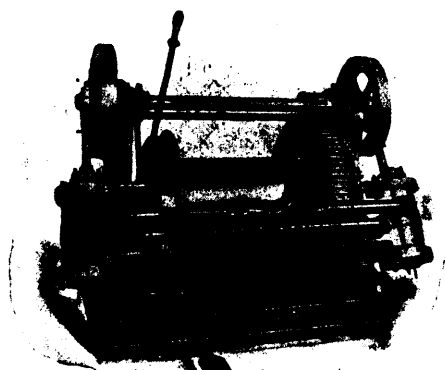
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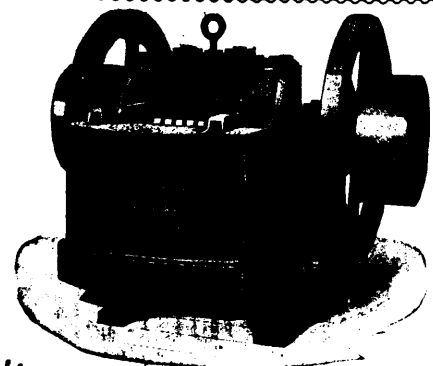
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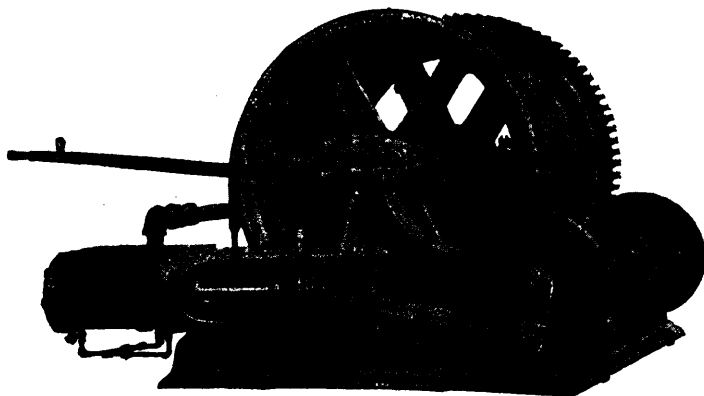
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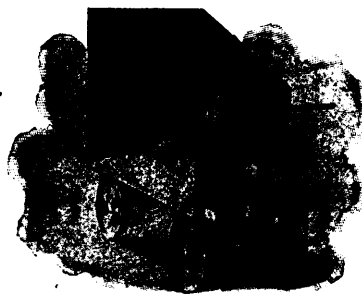
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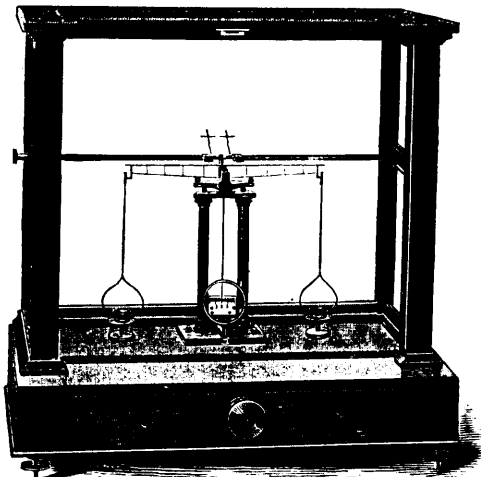
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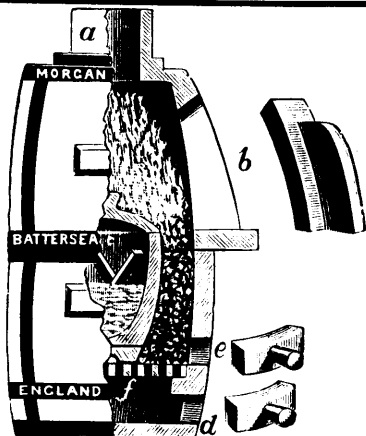
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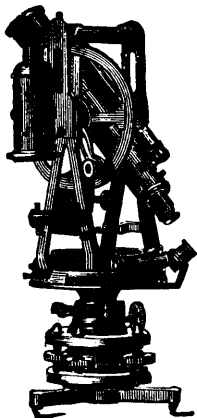
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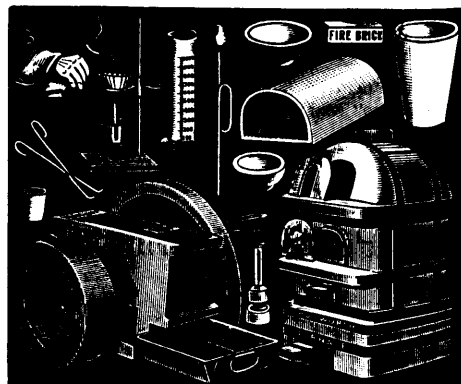
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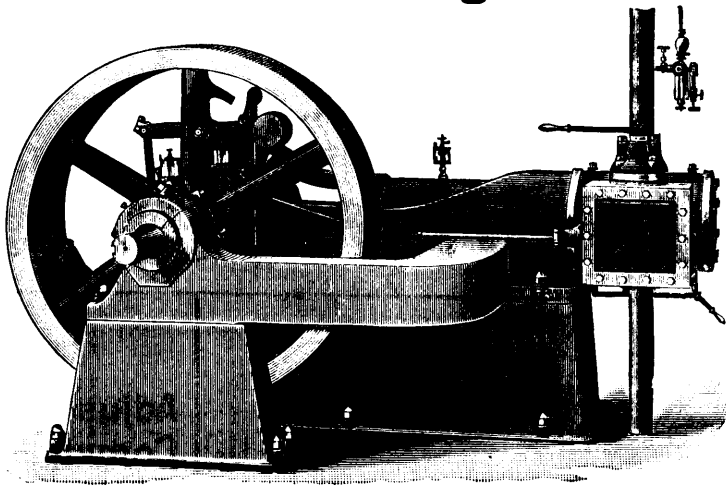
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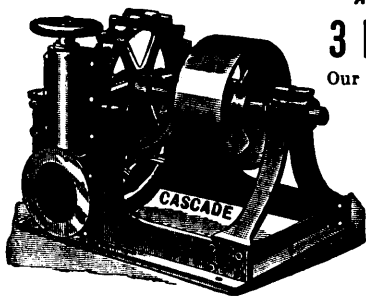
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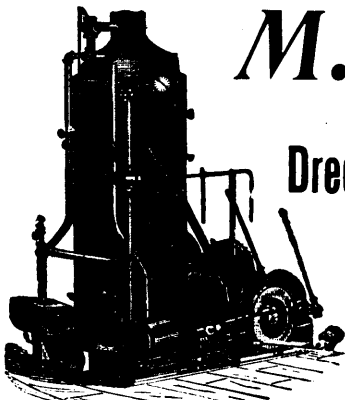
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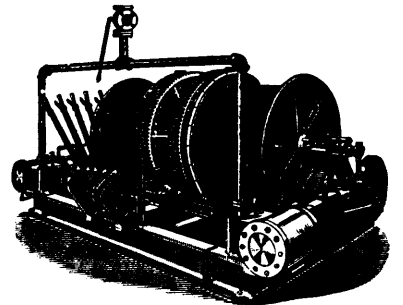
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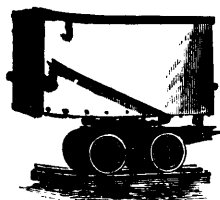
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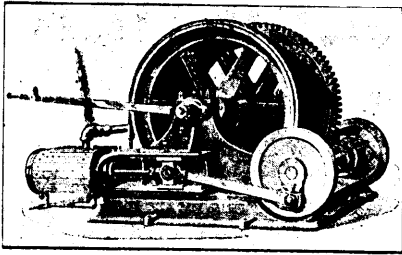
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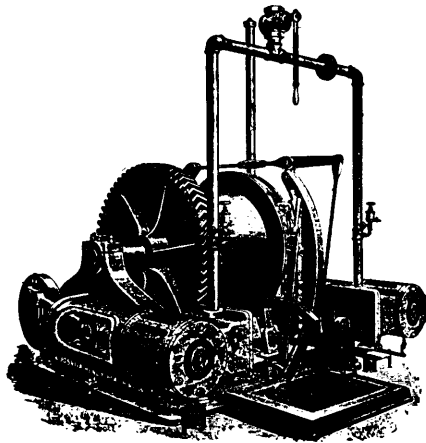
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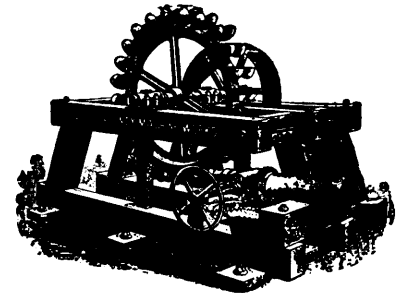
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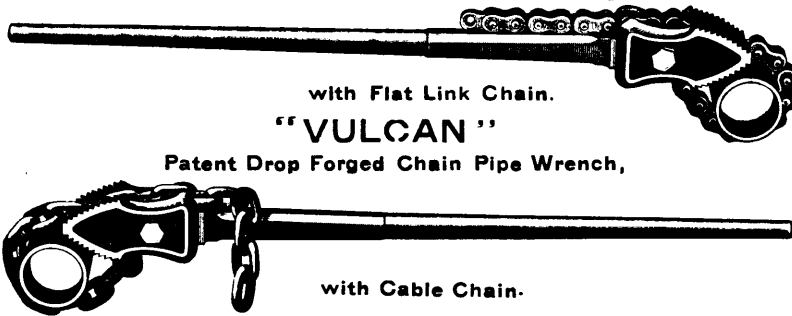
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The Mining Record.

Vol. V.

JULY, 1899.

No. 7

BRITISH COLUMBIA MINING RECORD

Devoted to the Mining Interests of British Columbia.

PUBLISHED BY

The Mining Record Limited Liability.

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ence to the work done is made to the map accompanying this statement.

"The ore bodies have been thoroughly sampled on the surface, and in the different levels as the work has progressed, and the value of copper to the ton of ore has been learned from time to time by assays and mill tests, and you will notice by reference to these assays, tabulated herewith, that the veins and lodes grow richer in copper as depth is attained.

RESULTS OF ASSAYS AND MILL TESTS.

Sample.	Copper per Ton.	Per Cent.	Gold.	Silver.
No. 1.....	\$ 15 80	7.9	\$ 4 00	\$ 3 00
No. 2.....	14 00	7.	Trace	Trace
No. 3.....	17 00	8.5	4 35	Trace
No. 4.....	16 00	8.	1 65	1 20
No. 5.....	36 00	18.	2 20	Trace
No. 6.....	151 90	75.	Trace	Trace
No. 7.....	39 77	19.	1 50	2 20
No. 8.....	42 50	21.5	Trace	Trace
No. 9.....	83 90	41	1 80	1 65
No. 10.....	68 80	34.	2 10	Trace

S

ONE of the most bare-faced and impudent swindle ever attempted in this country is the promotion in Boston by two adventurers named respectively Crosbie and Beach, of a concern which is described as the "Boston and British Columbia A BARE-FACED Copper Mining and Smelting Company," with a capital of three million dollars. But in order that the full facts of this glaring instance of fraud may be placed at the disposal of the public we print the prospectus of this precious promotion in full:

"This corporation is formed under the laws of the State of Maine, and registered in the Province of British Columbia, Canada.

"This company owns the valuable copper properties known as the Standard Group of copper mines, consisting of seven full mining claims, containing approximately 375 acres of mineral land, all located in the Revelstoke mining district of British Columbia, Canada.

"Each of these seven properties are 1,500 by 1,500 feet in extent.

"Title is absolutely perfect.

"There are five distinct parallel copper lodes running through these claims; the narrowest ledge averages 14 feet in width, and the widest ledge at the Standard mine will run from 45 to 75 feet in width. There are about 3½ miles of copper lode matter on this property owned by the company.

"A large amount of money has already been expended on development work. This work has been carried on for the past two years, and has been continued up to date. Present development in the tunnels, shafts, cross-cuts and winzes discloses several huge veins of mineral of great value in copper; refer-

"In computing the value of the copper in the above tables, copper has been figured at 10 cents per pound, but as the market price of copper to-day ranks from 17½ to 18 cents per pound, far larger values ought to be considered.

"The quality of copper is excellent, being peculiarly ductile, and equal, if not superior to any copper produced elsewhere.

"The numerous assays and mill tests amply demonstrate the fact that one hundred tons of average ore will produce at least twelve tons of metallic copper, at present prices worth \$4,200. It is expected to work about 100 tons per day at first, and to largely increase the amount. It can be mined, transported to the company's reduction works and treated for \$5 per ton. Our by products will pay all expenses, leaving the ingot copper produced net profit. A profit of \$4,200 per day, \$1,500,000 a year, and capable of great increase in proportion as the plant is enlarged, is entirely reasonable from the beginning, and absolutely assured.

"Copper mining is one of the safest and most profitable industries in America. One need only call attention, to prove this statement, to the Calumet and Hecla, Anaconda, Boston and Montana, the Parrot, Osceola, Quincy, Tamarack, and the United Verde copper mines. The enormous dividends paid by these corporations and many other copper properties of immense value is well known. Enormous fortunes have been made by Boston and New England people in copper stocks. The principal copper stocks dealt in on the Boston market have risen \$100,000,000 in value, and the end is not yet.

"One may fully understand what the enormous mineral showing on the properties owned by this

company means when the fact is set forth that the ores of the greatest of all of the copper mines in America averages not over 4 to 5 per cent. in copper.

"The history of these great corporations and the millions of dividends these companies have paid, is well known to the business world.

"Contrast these facts with the enormous ore bodies in the Standard Group of copper mines owned by this company.

"With permanent veins and rich lodes, as large as shown on the map, at a depth of a hundred feet, a general sample of the ore body shows an average of copper of 23½ per cent. to the ton. In estimating the profits of the company as shown previously, we have figured only on a basis of 12 per cent. copper.

"Our Mr. George W. Beach, the well known mining expert, of British Columbia, in his report to the directors of this company, makes the following important statement :

"The Standard Group of copper mines has every evidence of being a magnificent copper proposition. The geological formation of the Standard Basin, where these mines are located, is an ideal one, and is a formation in which mineral lodes carrying high percentages of value are usually found. All veins are contact, that is, the ore bodies are found in contact between formations of different geological ages. The ore shutes are permanent, and where sampled in the deeper levels shows a higher percentage of copper and gold values than on the surface.

"From actual measurement, I have computed that there is 750,000 tons of copper ore in sight.

"There is another special advantage that I desire to call your attention to, and it is this : that I never saw a mining property better located for obtaining deep levels, and cutting the ore bodies at great depth by short tunnels. With a smelter and reduction works operating in conjunction with the mines, as you contemplate, there is no question but what your stockholders will receive enormous dividends from their investment in the shares of the company."

"In the properties of this company, we have every advantage that the earth can give us. Enormous veins, rich in copper ore at such a height that the present generation could never hope to win the millions of tons of copper ore above water levels, any quantity of water power for mining and all other purposes, estimated to be 5,000 miner's inches at the Standard mine, and unlimited quantities of timber for all purposes.

"Copper has a ready cash market. The demand for copper is greatly in excess of the supply. Increased cost of production in some localities, and the probable decrease of ores in others, makes it possible for this demand to continue indefinitely. Prices have advanced some 5 to 6 cents per pound in the last few months, and the consumption of copper is increasing at an amazing rate all over the world.

"A contract has been entered into by the corporation for the erection of a smelter and reduction works, with a capacity of not more than 500 tons per day, large enough for our own output and that of the mines in the vicinity of Revelstoke. This absolutely assures large dividends on our entire capital, leaving our own ingot copper surplus profits.

"We unhesitatingly state that we can produce ingot copper as cheap if not cheaper than any other copper mining company in America.

"Further information of the company's properties and operations may be obtained at its offices at Bos-

ton, where maps of the mines and specimens of the ore may be seen, and every opportunity offered for the fullest investigation, which is cordially invited.

"The shares in this company are the safest and best paying investment offered to the public to-day.

"For the present a limited number of shares of the capital stock of the corporation, par value, \$10 per share, fully paid and non-assessable, are offered to the public for sale at \$2.50 per share, in order to raise a fund for additional machinery, smelting and reduction works.

"All checks should be made payable to George W. French, treasurer of the company, 82, 83, 84 International Trust Company Building, Milk and Devonshire streets, Boston, Mass."

So far as our British Columbia readers are concerned, to comment on or criticise the many truly astounding statements contained in the foregoing quite remarkable document would be merely a waste of time and space, but at the present time investors in Eastern America, and notably in New York and Boston, are so favourably disposed towards anything in the shape of copper mines, that it is not at all unlikely that many will be found ready to bite at just such skillfully disguised baits as that with which this so-called Boston & British Columbia Copper Mining & Smelting Company are angling.

It is gratifying, meanwhile, to learn that New York has been officially cautioned by our Provincial Department of Mines that investigation in this case is necessary, and that Mr. J. M. Kellie, M.P., as member for the district, has, in a letter to a local newspaper—the *Kootenay Mail*—in a commendable manner, taken steps to expose the nefarious scheme of the men, Crosbie and Beach. In passing, it may not be out of place to suggest that if other members of Parliament in British Columbia will profit by the example set them by Mr. Kellie, in publicly exposing swindles and frauds such as the Boston & British Columbia Copper Mining & Smelting Company, the like of which must only too frequently come under their notice, they will assuredly earn the gratitude of those among their constituents interested in promoting the welfare of legitimate mining in the Province, and at the same time do the country a valuable service.

But to return to the prospectus before us. In the opening paragraphs it is stated that the Boston & British Columbia Copper Mining & Smelting Company "is registered in the Province of British Columbia," and that the Company owns "the valuable copper properties known as the Standard group of copper mines," or approximately three hundred and seventy-five acres of mineral land. Both of these statements are untrue. The Company has not been registered in British Columbia, nor does it yet own the mineral claims mentioned, a bond upon which the first payment of three thousand dollars has been made, alone constituting its right to the property. Space in the prospectus is next devoted to a "description" of these valuable copper mines, and as an example of imaginative skill the result is certainly very brilliant. We are told that there are in all five distinct parallel ledges, the narrowest of which does not average less than fourteen feet, and the widest ledge is from forty-five to seventy-five feet across; that these ledges aggregate three-and-a-half miles of "lode matter," that a large amount of money has been already expended in development work, and that it has been thus shown that the veins and ledges "grow richer in copper as depth is attained." Here follows the table as above published, giving the

results of assays and mill tests, but the names of the persons who made them are by an oversight evidently omitted. It is strange, too, that the British Columbia Department of Mines, which is supposed to be well supplied with all information appertaining to the mines of the Province, has no knowledge of this wonderful three-and-a-half miles of copper reef near Revelstoke, insomuch as no mention is made of it at all in the recently published Report of the Department for 1898; but this also may probably have been an oversight on the part of the Provincial Mineralogist. Notices have, however, appeared of late in the Revelstoke newspapers, from which it is gathered that the Standard claim has been developed by a forty-five-foot tunnel and a fifty-foot shaft, that no assays of the ore have been obtained, but that a very promising copper vein has been exposed, the width of which is probably four feet. Mr. George W. Beach, "the well-known mining expert of British Columbia," from actual measurement, computed that on this prospect "there is 750,000 tons of copper ore in sight," and the prospectus promises a profit on the working of \$4,200 per day, or \$1,500,000 per annum. We should imagine that there was quite sufficient evidence here on which to prosecute Messrs. Crosbie and Beach for fraud should they have the temerity to register the Boston & British Columbia Copper Mining & Smelting Company under the laws of the Province.

WE have before us the prospectus of the Cariboo Consolidated, Limited, a company recently incorporated in London with a capital of £350,000 in £1 shares. Of the total capital 100,000 shares are appropriated to provide working capital, and of the 200,000 shares comprising the present issue to which the public are invited to subscribe, 80,000 are to be at once set aside for the purpose above stated. The Directors, however, promise that "they will not proceed to allotment unless at least one-half of the shares offered are subscribed for." In perusing this prospectus, which, by the way, is a quite voluminous pamphlet of a dozen pages or more, one cannot help being immediately struck with the somewhat curious similarity between the name given to this concern and that of the big Cariboo undertaking with which so many prominent men in Canada are associated; we refer to the Consolidated Cariboo. On the Consolidated Cariboo, as everyone knows, very large sums of money have been expended with the result that the property, now thoroughly equipped and well developed, is at length in a position, so it is stated, to hereafter pay fair returns on the capital invested in it. This coincidence of name must, of course, have escaped the attention of the London promoters of the Cariboo Consolidated, Limited, but we feel sure that when it is brought to their notice, and when they, moreover, learn that under our registration laws, they will be unable to obtain a license permitting their company to carry on business in British Columbia under the title of the Cariboo Consolidated, Limited, they will promptly find another and, may we suggest, a more strikingly original name by which to designate their enterprise. We quite admit that a promoter must necessarily meet with almost the same difficulty in the choice of an appropriate and "fetching" designation for a new flotation as it is said a novelist finds in christening a work of fiction before sending it to

the publishers. It will, however, be conceded, that speaking generally, authors display more originality, at least, in the choosing of names than your company promoter, for while one rarely comes across two books written by different persons, bearing the same title, it is no uncommon thing to find a new company enterprise called after an old and successful company enterprise, or rather, the christian names, so to speak, of both will be identical, while the difference, such as it is, will be noticed only in the surname. Patriotic parents very frequently and laudably enough, bestow upon their offspring the cognomen which some great warrior or statesman has made distinguished, but when this complimentary style of paying tribute to eminence and success is introduced from domestic into stock exchange circles, cynics are apt to awkwardly misconstrue or question motives. Hence, with the Cariboo Consolidated, Limited. And in view of the wide area over which its properties are spread, how much more appropriately might it not have been styled (say, for instance) the Cariboo "Scattered," Limited?—a title at once, distinctive and suitable. But this after all is a matter of detail and we pass to the more important consideration of the prospectus itself. We find the company has been formed to acquire from the Gold Lands Corporation, Limited, who are the vendors and promoters, nineteen claims in the Lillooet and Cariboo districts, comprising an approximate area of 12,000 acres, exclusive of five miles of dredging rights. At the instance of the vendors these properties have been reported on by Mr. Rathbone, the South African engineer; Mr. W. J. Newall, a mining engineer recently from Mexico; Senator Campbell, Mr. J. B. Hobson, Mr. W. Thompson, formerly Government Mineralogist in Queensland; Mr. James Champion, C. E.; Mr. J. J. Nickson, M. E. (*sic*); Mr. W. E. Brett, M. E. (*sic*), and Mr. J. Cobeldick. Messrs. Campbell, Hobson and Thompson are well known in British Columbia as highly qualified authorities on hydraulic gold mining. Of the capabilities in this direction of the other gentlemen mentioned nothing is really known in this country, though we can cordially congratulate both Mr. Nickson and Mr. Brett upon their sudden elevation to the dignity of mining engineers, the one from being a Vancouver carpenter and contractor and the other a Lillooett prospector. Mr. Cobeldick, we note, is the only expert in the list quoted, to whose name no distinguishing initials have been appended, an omission doubtless attributable to that gentleman's presence in London, and his refusal to be described as a mining engineer in the company's prospectus. Be this as it may, an extract from Mr. Cobeldick's report, in which he says, "I have examined, as requested, Lowhee Creek property and Lightning Creek property, and advise you strongly to purchase both," is specially quoted in the prospectus, and if Mr. Cobeldick is not a mining engineer it would be interesting to learn in what capacity he makes this strong recommendation. However, we quarrel not so much with the selection that has been made of properties this company propose to acquire, but with the manner in which their merits have been described in the prospectus. We submit that to quote from engineers' reports short extracts without giving the context is a dangerous practice, unfair to the engineers themselves, and calculated to deceive the public. This practice has been followed entirely in the present case, and it is needless to say that in

every instance the reports appear favourable, even though not always convincing. Thus reporting on Cunningham Creek properties, Mr. James Champion says:

"Having lived in this district for twelve years I am personally acquainted with all the miners working on Cunningham Creek at present, and the lowest estimate they gave me was 50 cents per cubic yard, and the majority of them said they were positive it would pay \$1 per cubic yard."

This, therefore, is not the report of Mr. Champion, but of miners working on the creek. Then again, Mr. J. J. Nickson, "M.E.," states of the same ground: "The gravel has been prospected, and values of \$1 to the cubic yard have been found on benches up to 100 feet high, and above that 45 cents per cubic yard. The quantity of water available for hydraulic work is more than required This property handled carefully would become one of the greatest revenue-producing hydraulic mines in the world."

It is not evidently thought worth while to mention by whom the "gravel was prospected," which surely is here the only matter of importance. In fact, Mr. Nickson appears to have a penchant for making statements of this nature, for he also reports on a Cariboo Lake dredging lease:

"The cost of dredging such material as we have will not exceed 3 cents per cubic yard. While I believe many parts of the bars will pay probably \$5 to the yard, I think that 50 cents per cubic yard would be a reasonable estimate." "He considers," it is added, "that with such an immense deposit, if the estimate were only 20 cents to the yard, an immense revenue would accrue, namely, \$50,500,000 after deducting 3 cents per cubic yard for operating expenses."

But what tests have been made in support of these assertions?

Then reporting on three claims on French Creek, Mr. Champion is quoted as follows:

"I do not consider this a mere prospect, nor a partially developed property; the records in the Gold Commissioner's Office will show that hundreds of thousands of dollars have been taken both above and below the property, now referred to, in fact some of the richest that have been in Cariboo are adjacent to this property By taking advantage of the work that has been done I think there will be no difficulty in finding the channel, and when once found there is no doubt whatever as to its richness."

We, however, are quite at a loss to understand how a claim that has in no sense been developed, can be anything else but a prospect, even though Mr. Champion "thinks" there will be no difficulty in finding the channel.

We could easily give many more examples of a similar character, but exigencies of space forbid. Meanwhile, it is sufficient to say that even Mr. Campbell and Mr. Thompson qualify every one of their statements with "ifs" and "whens." They "think," and "are informed," and "consider," but there is hardly an extract from any of the reports quoted in the prospectus of a definite or emphatic nature, showing that opinion is based on actual tests. Great stress is laid on the fact that the properties being practically within a radius of twenty miles can be economically controlled by one central management, but when it is remembered that this implies a distance of forty miles between some of the claims in a

country where travel is difficult, we imagine that it will be at least found necessary, in the event of the acquisition of these properties by the Cariboo Consolidated, Limited, to have a well-paid official, responsible for the gold output, in charge at each of the claims.

In estimating the profits of the venture, the directors of this company consider that when the properties are "fully equipped and in working order, the claims will speedily arrive at a position to return handsome profits upon the capital of the company." This capital is roughly one million, seven hundred thousand dollars, of which one million and a quarter is to go into the pockets of the vendors and promoters. A balance of half-a million dollars therefore remains with which to "thoroughly equip" and put "in working order" an approximate area of miners ground of over twelve thousand acres, exclusive of five miles of dredging rights. A well-managed Canadian Company, the Consolidated Cariboo has taken several years to equip one property, and the cost thereof to date has been considerably over a million dollars.

The 8-hour law question still takes precedence of all others in the Slocan, and a speedy adjustment of the point of disagreement between employers and employees still seems most doubtful. All unprejudiced people will agree that the Unions are behaving most unreasonably, for when the Slocan Star Mining Company offered the men the liberal and proportionately higher wage of three dollars and a quarter for an 8-hour working day, it was unhesitatingly refused. No one, we opine, under such circumstances, would call the Slocan mine-owners to account if they decide to seek elsewhere for mine-workers. There is, however, one way of settling the difficulty to the satisfaction of both sides, and the suggestion has not previously, we think, been made. At the Hall Mines work has not been suspended, because much of the labour there is done by contract. The system of working a mine by contract has many advantages, and in many cases where it has been tried in this country the result has proved eminently satisfactory to both the mine-operators and the miners employed. In one mine on Texada Island, where this system has been recently introduced, drifting that cost \$16 per foot by day labour is now done for \$8, and at the same time the men earn no less than formerly. In many mines in other countries even the "mucking" is carried on under contract. If the Slocan miners are prepared to prove their statement that a man can do as much work underground in eight as in ten hours, the contract system should certainly meet with their approval. Since the above paragraph was put in print we observe that two or three mines in the Nelson district have adopted the contract system in employing labour, and others will follow suit.

Meanwhile the Union organizer in the Slocan, Mr. Wilkes, has stated, as the representative of the miners, his views on the question, which briefly are: That it is unreasonable of the mine-owners to reduce wages for an eight-hour day to \$3, because (1st) the men will accomplish more "in proportion to the hours worked in an eight-hour day than they will in a ten-hour day;" (2nd) that under the old system the men did not actually work more than nine hours; (3rd) that the "eight-hour day will only reduce the working hours of any mine—two shifts—from 19 to 16 hours, instead of from 20 to 16 hours as generally supposed;"

(4th) because coal miners only work eight hours; (5th) because the War Eagle mine management adopted the eight-hour system before compelled to do so; (6th) because, in Mr. Wilkes' opinion, "\$3.50 is not too much to pay good miners in this country;" (7th) because nowhere else in the British Empire "is there a precedent for ten hours' work by miners;" (8th) because the miners "believe that the mines can stand a reduction in the hours of labour without hurting them." Will it be believed that a strike has been organized on such lamentably feeble grounds as these? Of all the reasons Mr. Wilkes advances, is there a single one that could be seriously regarded as showing just cause why mine owners should suddenly be called upon to pay their employees higher wages for less work? Taking his own statement: With two ten-hour shifts the men formerly worked 19 hours, for which they received \$7 per day, under the eight-hour system they would work 16 hours for \$6 per day; the average pay per hour for the former is rather under 37 cents and for the latter rather over this amount. This is the only one of Mr. Wilkes' "arguments" at all worthy of consideration, the others are simply not to the point. For instance, coal miners, it is true, do not work under ground more than eight hours, but they work under contract; miners in the War Eagle mine work no more than eight hours, but only machine men are paid the \$3.50 per day wage. If Mr. Wilkes desires to prove that a miner should not continue to work longer than eight hours underground, that is another matter and we are quite prepared to endorse his views, but this should be the subject of arrangement between the employer and employees. We maintain, however, that no legislature has the right to dictate to an able bodied man of mature age how many hours he may or may not labour at his trade or calling, and by gratuitously introducing a law having this effect, the British Columbia Legislature have committed a very grave error and the whole responsibility for the present unfortunate state of affairs in the Slovan rests entirely with them.

Another argument—we use the word for want of a better—advanced by those who champion the cause of the miners in their demands for the old rate of wages while working shorter hours, is that the mines of the Slovan are so rich that the owners can well afford to pay high wages; and it is asked why should alien shareholders be allowed to sit quietly at home and take without effort all the profits from our rich silver-lead mines at the expense of the poor miner? For Heaven's sake, if the question is to be discussed at all, let it, at least, be done in a half rational manner. The world must grow many years older before it is educated up, or down, to the acceptance of socialistic doctrine. Because capital has developed a mine or any other enterprise until it is on a profit-earning basis, is labour to demand a bigger share, and if so, are the men employed in our Slovan mines, which are not yet in a position to earn dividends, and these are at present greatly in the majority—to be paid less than their more fortunate fellows engaged as miners in dividend paying mines? That is the conclusion to be deduced from the premises.

But for a gem in its way a resolution passed by the Silverton Miners' Union, on the subject of the eight hour law, is really quite unique, and we cannot refrain from publishing at least the gist of it.

"Resolved, that while struggling for the co-operative commonwealth and the establishment of justice and equality among men we favor, for temporary relief, the reduction of hours of labor as our best defensive weapon.

"Resolved, that it is an improvement of our conditions that we are seeking; that we do not feel called upon to maintain that as much work can be done in a few as in many hours or that it is right for us to continue doing as heretofore in order that we may justly demand the same pay. We assert that we have done too much work for the money, that we are not getting ten hours' pay for ten hours' work; and we deny that we are asking 'ten hours' pay for eight hours' work.

"And whereas, it is wise for us to vigorously use every resource at our command in order to speedily effect the ends we are seeking.

Resolved, that those who oppose us are our enemies and that those who aid us are our friends, and that we treat them accordingly.

"Resolved, that we will not love our enemies, that we will not 'turn the other cheek;' that we believe that retaliation is right.

"And therefore, it is resolved that we denounce as unworthy of our patronage such papers as the *Spokesman-Review*, of Spokane; *The Miner*, of Nelson; the *MINING RECORD*, of Vancouver; and all others that, like them, delight in special sophistical and pharasitical pleading for those who despoil us and support them from a small portion of the spoils.

"And to the business man, the merchants and hotel men; to the professional men, the lawyers doctors and preachers, all of whom, at periods of intenser struggles between employer and employee, usually affiliate with the former and deplore the agitation that discourages investment—to you we have this to say:

"We know that the rich would become richer if we would consent to give them a larger rake-off. But not only is a juster and wider distribution of wealth in our interest, it is in the interest of the state and country, and we are therefore your best citizens. We seek to "encourage" men to hope for the largest possible share of what they produce and are entitled to. You ask us to "enconrage" capital to come in, by promising to give it rich rewards. You ask us to "encourage" men with a hundred thousand dollars to see that they can here increase it to a million. But we deny that it is desirable to have any man in possession of a million, and maintain that we rightfully refuse to aid you in encouraging capitalists to come here with such greedy hopes. The higher wages and fewer hours that we favour would fill this country with the most intelligent, effective and happiest workmen of the world, a citizenship to be proud of. The dollar a day labourers that would most encourage the capitalist would drive every self-respecting citizen out of the country, and leave only cabins here for houses, while palaces would be built in Spokane, Butte, Salt Lake and London. And we say to you business and professional men that we propose to "encourage" business and professional men who do not give aid and comfort to our enemies.

"Resolved, that we do not consider ourselves any better than the miners of the Coeur d'Alenes. Outrageous and arrogant wrongs have ever provoked and should provoke violence. The history of no country needs to be closely searched to find records of violent resistance to tyrants. Good citizens of America, disguised as Indians, threw overboard the sacred prop-

erty of the capitalist on the occasion of the Boston Tea Party.

"Cromwell and other good people of England cut off the sacred head of Charles the First.

"Caesar had his Brutus.

"The Capots had their guillotine.

"The Coeur d'Alenens blew up the Bunker Hill mill.

"Let tyrants take warning!

"In conclusion we firmly declare that we are good and true citizens, organized to secure justice, and not to wrong any man. But we are not fools, and we will not reject the use of means effectual, just because they may not be conventionally popular."

The "bears" have been assiduously depreciating temporarily the price of the Payne Mine stock on the ground of the Eight Hours law. Their reason is, however, inadequate for the Payne has already resources enough available to continue its average dividend payments for several months and it is to be hoped long before these are exhausted a settlement of the present labour difficulty will have been certain. However, Payne Mine stock values had previously reached too high a point and were consequently certain in any case to decline.

From all recent accounts Atlin has been very much over-boomed, and instead of being a 'Tom Tiddlers' ground for poor men, the press correspondents now tell us that all previous reports regarding the shallowness of the diggings were incorrect, that it is necessary to sink deep shafts to get to bed-rock on most of the creeks, and that from all appearances hydraulic-ing will prove the only profitable method of mining in this territory. All of which may or may not be true; but as this information has no more authoritative or scientific source than the other, said to be reliable, wise men will be content to await further developments.

Apropos of the eight-hour question the following paragraph from the New York *Sun* is of more than passing interest:

"The first protest on record by trades unions against the eight-hour workday was made to the Dock Board yesterday by the Ship Carpenters' and Caulkers' Unions. These unions ask the Dock Board not to enforce the eight-hour law in its department. The reason given is that the men are paid by the hour and are therefore anxious to put in as long a day as possible. Surprise was expressed by the Commissioners at receiving this protest, as the labor unions have been demanding the eight-hour workday for years and there have been more strikes to enforce it than from all other causes put together. The Dock Board, according to the present law, cannot employ the men more than eight hours a day."

Meanwhile, it may be noted that at several Colorado mines and smelters the system has been adopted of making an hour instead of a day the unit of payment. It is alleged, however, that this change is not at all popular with either the mine or smelter workers.

A New Zealand newspaper publishes the following interesting piece of intelligence:

"Mr. John A. Wauchope, F.R.C.S., who, with his wife, left New Zealand some twelve or fifteen months

ago, and after spending a few months in the Old Country went out to British Columbia to develop on behalf of a Scotch company a supposedly very valuable gold mining property near Harrison Lake (some one hundred miles from Vancouver), has just returned to London. He has come back with a good opinion of British Columbia as a country, but does not seem to think much of it as a gold-producing area, whilst for the inhabitants he has an utter contempt. Whilst in charge of the Harrison Lake property, which proved a duffer and was shut down in October last, Mr. Wauchope had a somewhat unpleasant experience. The miners he had at work for him were not miners in the true sense of the word. They could handle a pick and shovel, but were, as a rule, utterly unfamiliar with even the ABC of gold getting. Moreover, they were mostly utter blackguards. Mr. Wauchope's foreman, a queer sort of creature, holding the tenets of the Mormon creed and a powerful prayer, arranged with two other men that when the manager next went down the shaft he should be welcomed at the bottom with a blow on the head. This pretty little conspiracy, luckily for Mr. Wauchope, proved too much for one of the parties concerned, and he 'blabbed.' Next day the foreman requested the manager to 'go and 'ave a look at things below.' Mr. Wauchope consented, but took with him a revolver and a small pick, which weapons ostensibly displayed prevented any attempt on his person. A few days later he got the foreman on some pretext to go down with him to Agassiz, the nearest township owning a police force and a court of justice, and handed the chief conspirator over to the authorities. At the trial the would-be assaulter wept bitterly, and Mr. Wauchope, foolishly perhaps, made a strong appeal to the magistrate to deal leniently with the prisoner. They did so, only binding him over to keep the peace for twelve months. At the same time they gave Mr. Wauchope permission to carry firearms. After shutting down the Harrison Lake 'wild cat' Mr. Wauchope made a move to the Lillooet River, where he managed six claims for a local company. These did not pan out to his satisfaction. Both he and Mrs. Wauchope being tired of the country and in poor health they decided to come to England again for a spell."

We have gone to some little pains to find out whether this truly remarkable story has the slightest foundation in fact, with the result that we have recently received from our correspondent at Harrison Lake—a gentleman in whose reliability we have the utmost confidence—some interesting information in connection with the affair to which Mr. Wauchope so pitifully alludes. Mr. Wauchope, a typical "yellow-legger," it appears, arrived at Harrison Lake about a year ago, ostensibly to open up a mineral claim at a spot on the Lake known as Six-Mile Bay. He employed two miners, and for some time was wonderfully enthusiastic. He had never seen so promising a mineral country, and was quite certain that the "Mother Lode" of the district, that on which the "Providence" was located, ran through his ground. The "Providence" was situated at least ten miles distant; but that of course is a mere detail. Our correspondent believes that the three claims at Six-Mile Bay were owned by a man named Nicholls, and the arrangement was made that Mr. Wauchope's company should develop the properties in exchange for one of them, and at the same time Nicholls stipulated that he should be engaged as foreman on the work. Shortly afterwards Mr. Wauchope located a property

on Lillooet River, spending a great deal of his time in this locality. Nicholls appears then to have entertained suspicions, which he confided to his fellow workman at Six-Mile Bay, a man named Ward, that Wauchope was spending the money intended for the development of the Harrison properties on this Lillooet claim, and Ward, when the worse for liquor, informed Mr. Wauchope that Nicholls meant to do him an injury. This so alarmed Mr. Wauchope that he proceeded post haste to Agassiz, and on Ward's evidence—the man was still in a drunken condition—induced two local magistrates to bind Nicholls over to keep the peace. At this time Nicholls was in Lillooet, and was most astonished when he subsequently learnt of what had taken place. Mr. Wauchope never returned to the Harrison claims, but left shortly afterwards for England, where, on the strength of his experience in the Harrison and Lillooet district, he poses as an authority on mining in British Columbia, which "he does not think much of as a gold-producing area," but notwithstanding strongly advocates the treatment of its low grade ores by the "Beam" process. After such an opinion from such a source there is naturally nothing for it but to abandon all hope, but those of us who believe in the efficacy of prayer can at least have the solace of adding to the Litany one more clause, which shall read: "From all Jim-Crow experts, yellow-leggers and like visitations, Good Lord, deliver us!"

Some time ago we commented on the length of time—fifteen days—occupied in the treating of the Dorotha Morton ores by cyanide before the extraction was completed. This difficulty, we now learn, has been recently overcome. Mr. Lang, the Fairfield company's manager, having discovered that by crushing coarser and using a screen of thirty mesh instead of as formerly—twenty mesh—extraction is limited to seven days, and at the same time a higher percentage of values is recovered. Thus last month's operations show a nearly 90 per cent. gold and an 80 per cent. silver extraction, a very material gain over previous returns. As will be seen by our statistical tables in another column, this mine is making a very remarkable showing, the value of the output last month being \$13,138 as against \$9,536 in April, and \$3,363 in December last. The bullion returns for the six months aggregate \$48,245. The cost of working which includes mining, transportation, crushing and cyaniding, have been \$6 per ton, but these costs, it is confidently affirmed, will be considerably reduced directly the mine is developed sufficiently to warrant an increase of the crushing and treating capacity. The success that has attended cyaniding operations at the Dorotha Morton mine should certainly stimulate and encourage mining enterprise in the Mainland coast districts.

One result of the "boom" and general inflation of prices in the metal market has been to greatly increase the cost of mine machinery. Thus the price of boilers is over 200 per cent. higher than at the beginning of the year, and in the last month boiler plates have advanced in price 30 per cent. Messrs. Wm. Hamilton & Co., the great Canadian machinery manufacturers, have now a large number of contracts in hand, chiefly for stamp mills, but to obtain iron from the United States they are obliged to pay a big premium over and above the market price, to get their orders filled or even recognised.

The end of the Golden Cache fiasco is seemingly in sight, for ere these lines are published, the sheriff will have sold under writ of execution issued on behalf of Dr. Carroll, of Vancouver, a former trustee of the company, the machinery and plant of the undertaking. It is doubtful if the property will ever be worked again, though it is said that one of the leading officials of the company is still not without hopes, that further development may, if it can be arranged, reveal some gold-bearing ore, now obscured by faults, but capable of profitable working. Most of those originally connected with the enterprise, however, some time since practically abandoned it to its fate after realisation in some cases of very considerable profits, doubtfully gained. The downfall of the Golden Cache has naturally given a bad set-back to other Lillooet free milling gold concerns, some of which are in consequence quite unable to raise sufficient working capital.

If things go on as at present much longer the War Eagle, from all appearance, will for a time at least occupy the proud position of being the largest dividend paying mine in West Kootenay. It is fast overhauling the Le Roy, and the Payne, if the labour difficulties are not speedily adjusted must certainly look to its laurels. By the payment of the last regular monthly dividend the War Eagle has now returned to its shareholders no less a sum than \$335,250.

But if the War Eagle is making a very creditable financial showing, it is earning a very unenviable reputation as an unsafe mine, or rather, one in which accidents are becoming of altogether too frequent occurrence. Again this month a fatal accident is reported as having taken place in the War Eagle, and like that of a few weeks back, due entirely to carelessness or want of proper supervision on the part of the management. It appears that while five men were drilling in the 625-foot level of this mine, about 11 o'clock of the 23rd inst., one of the drills struck a missed hole and the blast that had failed to go off the previous evening, exploded, with the result that of the five men, two were instantly killed, two fatally and one seriously injured.

It has been stated that a number of the Cape Breton miners, engaged by the Crow's Nest Coal Company to work in the East Kootenay collieries, have returned with their families to Nova Scotia, giving as a reason that while certainly wages are higher in British Columbia, the unhealthiness of the Crow's Nest climate and the poor quality of the food supplied to them more than counterbalanced any advantage to be gained in the way of increased pay. It appears, however, that there is very little truth in this story, eight only of the one hundred miners from Nova Scotia having left their employment at L'ernie, and these even not for the reasons alleged.

The strike a week or so ago, at the Crow's Nest collieries was of short duration, the coal company having compromised matters with the miners—and the Crow's Nest colliers, by the way, are as fine a class of men as any manager ever had to deal with. The dispute arose on the question of the stoppage of the allowance of 15 cents per ton for "stone." This allowance was granted in December, but on the contention of the men that there was an average of from six to eight inches of stone in each room. This stone,

however, having practically disappeared the management decided that the allowance should cease; and that the men were to be paid merely for the coal at the rate of 55 cents per ton. The miners contended that they could not earn a fair day's wage on the basis of 55 cents per ton of coal, and consequently went out on strike. The coal company then offered sixty cents per ton, and the miners agreeing to this price as a fair compromise, work at the collieries was, without further delay, resumed.

A Major Halder, acting as special commissioner for Reuter's Press Agency, has recently given his opinion through interviews with local newspaper representatives, on our mining laws, the condition of labour in our mines, and also on other points. Major Halder has been in British Columbia barely two months, and we believe we are correct in stating that he has remained for the greater part of that time in Vancouver, and has certainly not visited any of our important mining centres. He, however, poses as an adverse critic, for which he has been thanked by that sapient body calling itself the Mining Committee of the B.C. Board of Trade. This certainly ought to be rebuke enough for any man. But to return, Major Halder's chief contention is that miners in this country are too highly paid, and he advocates as essential to the profitable working of our mines the employment of cheap Asiatic in substitution of white labour. Mine-owners and even Canadian shareholders in British Columbia mining companies will thank Major Halder for nothing for this piece of advice, both on grounds of patriotism and political economy. We have modelled our mining system a good deal after that of the United States, and we anticipate therefrom equally good results. The United States is at present the greatest mining country in the world, and, there, from the first mine labour has been paid for at a high rate. Is an imaginary line demarking the international boundary going to affect the future of our mines, other things being equal, as they undoubtedly are. As to our mining laws, with only one or two exceptions appertaining perhaps to the locating of ground, they have so far been found to cover all requirements, but in any case Major Halder is not likely to be consulted with regard to any changes considered necessary. Meanwhile, we observe, with a great deal of pleasure, that Mr. J. D. Kendall, the resident partner of the firm of Bewicke, Moreing & Co., in Vancouver, has taken up the cudgels in defence of our mining system against this recently imported and self-imposed critic, and in an interview Mr. Kendall, while pretending to disbelieve that Major Halder has made the statements attributed to him, directly challenges him to do so in writing and over his own signature. Mr. Kendall thus remarks: "I know that people from the Old Country very often allow themselves to criticize before they have time to understand, and I have a very vivid recollection of the severe rebuke that was administered by the director of the Ontario Bureau of Mines to an engineer of this class from the other side of the Atlantic, who had scarcely arrived in Ontario when he began to criticize the laws, etc., of the Province and compare them unfavourably with what he knew of South Africa. The director, in his report for 1898, after showing that the would-be critic could not have read the mining laws he seemed so anxious to criticize, concluded with these words: 'A man who will not qualify himself by information to express an in-

telligent criticism is not one to be depended on as counsellor of guide in the business affairs of men, but I cannot imagine that any one occupying the responsible position of Reuter's correspondent could be guilty of any similar act of rashness."

And now "Governor" Mackintosh has been dubbed by General Warren of Spokane and Rossland, the "Cecil Rhodes of Canada." It is to be hoped for Mr. Mackintosh's sake that the incident is not an evil omen. A previous mining promoter of B.C. ventures who was similarly styled by enthusiastic friends, Mr. E. Grant-Gowan, of London, England, cannot be said to have realized the high expectations thus raised.

It is not surprising to learn that the unfortunate Goldfields of British Columbia, Limited, has decided to abandon some, and is doubtful about others of the Coast district claims, which were acquired by it from the Channe Mining Company. Those who should know, stated at the time of the English company's purchase, that the Channe undertaking had got rid at sufficient advantage to itself of some properties of very doubtful worth. This fact the Goldfields of British Columbia, Limited, is now tardily discovering, as it would seem. Nor has that company acquired the Albert Canyon townsite, a hole in the mountains of little real value, which was boomed as of big prospective worth, if we are not mistaken, in the company's glowing prospectus. There has, it is said, been found some deficit in the title. In any case the real loss involved in the failure of transfer cannot be regarded as great. The company has, however, abandoned some of its mining properties, as the auditors reluctantly report, and the prospects of its subsidiary companies are dubious indeed. The titled Canne, the Earl of Essex, evidently a more or less ornamental figure-head of the company, cannot be congratulated on the results obtained, or likely to be obtained by a concern at the heart of which he was placed by Mr. Grant-Gowan—since retired—and his promoting collapse. And now the reports from the Waverley and Tangier mines (?) are unsatisfactory. Oh, what a fall was there!

A great deal of quite unnecessary trouble has been created by the somewhat ambiguous wording of section 4 of this year's Mineral Act Amendment Act. The clause reads as follows: "A free miner's certificate shall run from the date therefore and shall expire at midnight on the thirty-first day of May next after its date, or some subsequent thirty-first day of May." A good many people construed this as meaning that their licenses issued prior to the 31st of May must be renewed on that date and in consequence the Mining Recorders' offices in many districts were recently besieged by applicants seeking renewals. The Attorney-General has stated that persons having thus acted simply contributed gratuitously to the Provincial Treasury, for it was quite clear that the enactment was not intended to affect free miners' certificates issued previous to the 31st of May of this year. Of course, those studying the Act closely would at once see that the saving clause in section 20, sufficiently protected their interests until the coming into force of the Act on the 1st of May, but this, notwithstanding, all will agree it is most important that the wording of our Acts of Parliament, especially those relating to mining, should be so distinct and clear as to afford no opportunity for uncertainty with regard to their meaning.

THE EAST KOOTENAY OF YESTERDAY AND TO-DAY.

(By Wm. Baillie.)

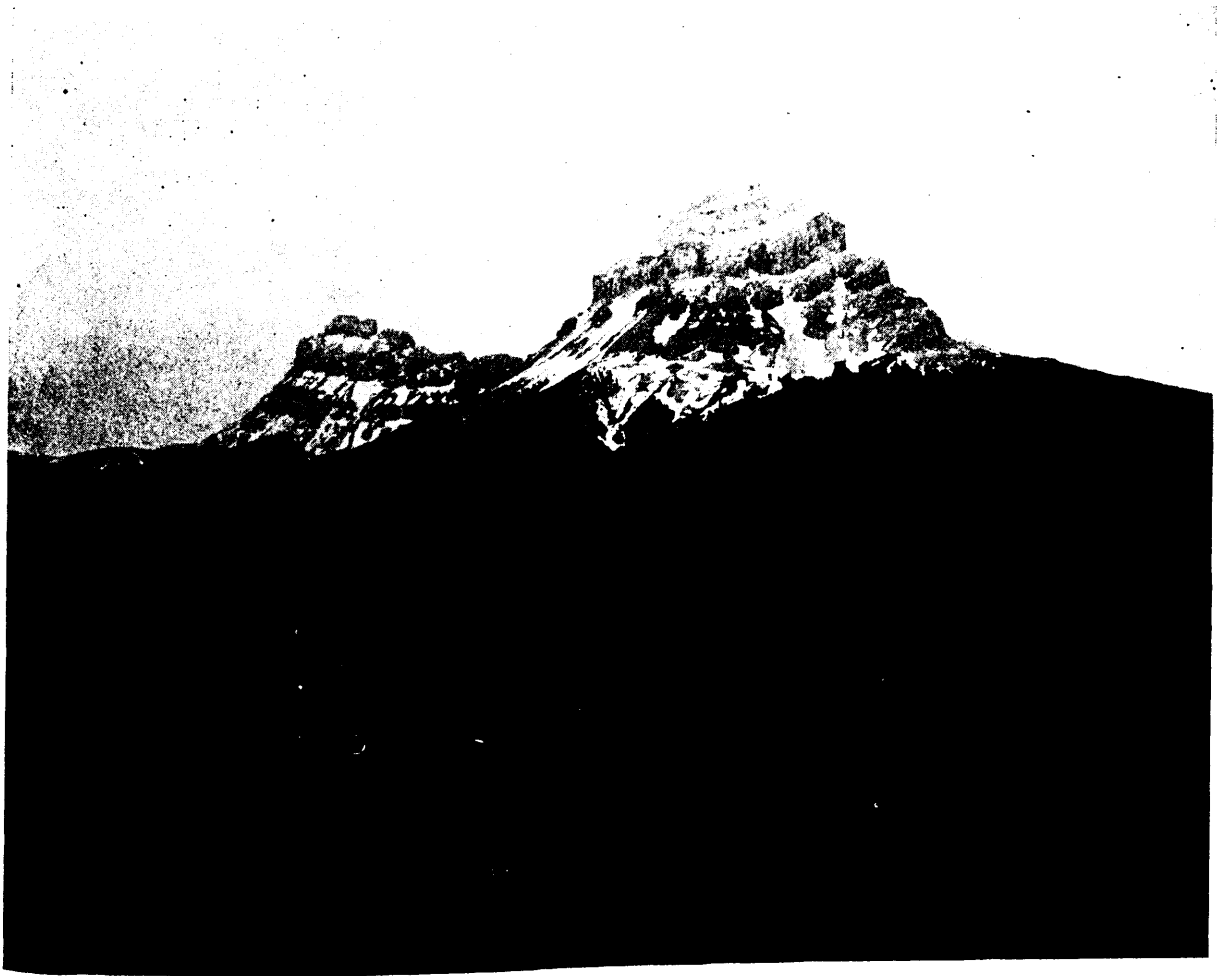
"Full many a glorious morning have I seen
Flatter the mountain-tops with sovereign eye,
Kissing with golden face the meadows green,
Gilding pale streams with heavenly alchemy."
—*Shakespeare: "The Sonnets."*

STANDING one morning last July on the verge of the high and precipitous cut banks of the Kootenay River at Fort Steele and watching the rising of the sun as its brilliant beams were shot through the jagged outline of the peaks of the Rocky Mountains, the

Cronbrook, still on to the Moyie Lakes—paradise of the angler—and still farther on till the mountain range that hems in Kootenay Lake thrusts up its rugged snow-peaked bulk against the horizon, eighty miles at least away. Clear blue are the skies, crisp is the air, and everywhere the luxuriant verdure of the valley, weighted down with heavy dew, each drop of which presently shall sparkle with diamond brilliancy in the rays of a glorious morning sun! Charming, is it not?

"Where every prospect pleases,
And only man is vile."

But I shall take the liberty of correcting the poet, and say only "lazy," for the inhabitants of Fort Steele



(Photo by

CROW'S NEST MOUNTAIN. CROW'S NEST PASS BRANCH, C. P. R.

Steele & Co., Macleod.)

above splendid lines from the sonnets of the immortal bard came rushing into my mind with a joyous thrill that I shall never forget. Charming was the scene, beyond any possible effort of description! The contour of the Rocky Range silhouetted here against the eastern sky, is serrated like a saw, and with the sun rising from behind but not yet visible, the profile is outlined with ruins of fiery gold, which stand out in magnificent contrast to the dark shadows lying on the westward slope of these giant hills. I am standing on the edge of a cut bank, perhaps 150 feet high, at the bottom of which flows the noble Kootenay. To the westward the eye travels over a flat valley a mile wide at this point, then onward over an open parklike country, past the little village of

—a thousand at that time, or thereabout—are still slumbering. They say—that is, those who are a bit malicious, which I am not—that if the citizens of Fort Steele had been wont to cultivate the habits of the early bird they might have "wormed" the Crow's Nest Railway into their town, instead of having it sweep by five miles distant. This *en passant*. Fort Steele has a history, and a stirring one, too. Thirty-five years ago there were five thousand miners camped there—the time of the famous rush of miners to Wild Horse Creek, which flows into Kootenay River at Fort Steele. These placers were for two years the mining sensation of Western America, and before going on with a description of the East Kootenay of to-day—it will be interesting perhaps to

say something of the old days and the excitements thereof.

Wild Horse Creek flows into the Kootenay River at Fort Steele and forms the southern boundary of that townsite. The discovery on Wild Horse was made in 1864 by miners who had come up from the States, attracted by reports of gold on Findlay Creek, at the head waters of Columbia River, and in the Big Bend country. These miners all had their starting point from Walla Walla, in what is now the State of Washington, and the stories that are told of the hardships encountered in making the journey inward rival those of the famous gold-seekers of the Cariboo. Jack Fisher and Bob Dore, the latter still

gaged in drawing up a code of laws for the government of the camp. In these arrangements Mr. Haynes at once interfered, nor was his interference resented, for the miners promptly abdicated the law-making functions they had usurped, and cheerfully obeyed regulations as prescribed by the Colonial Agent. The result was that the camp became one of the quietest and most orderly in the early mining history of the West; disputes were quietly and effectively settled, and the pistol and knife went completely out of fashion. During 1864-65-66 it is estimated that there were 5,000 people on Wild Horse Creek, and gold to the value of something like \$15,000,000 was taken out. This at least is the



(Photo by

RIVERSIDE AVENUE, FORT STEELE, B.C.

Steele & Co., Macleod.)

a resident of the district, have the honour of making the first discoveries, but as often happens in such cases, they were by no means the largest participators in the great wealth which the creek yielded. So rapidly did the news of these placers spread that by August of the same year upwards of 1,500 miners were at work on the creek. They were nearly all Americans, and in the absence of any British Columbia official there, the camp for a time was rife with those lawless proceedings so characteristic of the mining camps from which they had come. In July, however, something like order had been restored, and when the B.C. agent, Mr. Haynes, arrived from New Westminster (which was then the Capital of the Mainland colony) he found them en-

current estimate, although of course no definite statistics are obtainable.

As a matter of comparison with the conditions prevailing at the present day in similarly remote placer fields it will be interesting to cite some data of the returns from the Wild Horse diggings, and the cost of provisions. In a report of Mr. Haynes to the Colonial Secretary at New Westminster, dated September 3rd, 1864, the following list is given, showing the "amounts taken daily from ten of the best claims in this district":

No. 1.—Six men employed; yield per day, \$400; during week ending 3rd September, 134 oz.

No. 2.—Twelve men working; yield per day, \$200; during week ending 3rd September, 158 oz.

No. 3.—Thirteen men employed; yield per day, \$474; during week ending 3rd September, 143 oz.; amount of gold taken from this claim during the month of August last, 719½ oz., or \$12,948, at the value of gold here.

No. 5.—Twelve men employed; yield per day, \$1,044; 4 days' sluicing, \$4,176.

No. 6.—Nine men employed; yield per day, \$108; during week ending 3rd September, 36 oz.

No. 7.—Fifteen men employed; yield per day, \$600; during week ending September 3rd, \$3,600, or 200 oz.

No. 8.—Seventeen men employed; yield per day,

commend to the perusal of those looking into the history of British Columbia, entitled "Vancouver Island and British Columbia; Their History Resources and Prospects," written by Matthew Macfie, F.R.G.S., and published by Longman's in London in 1865, there are to be found some valuable references to the East Kootenay excitement of 1864. The author gives the following:

"List of prices of provisions at Wild Horse Creek, District of Kootenais: Flour, 40c; bacon, \$1; beans, 50c; sugar, 70c; coffee, \$1; tea, \$2.25; beef, 30c; dried apples 60c; butter, \$1.50; lard, 80c; tobacco, \$2.50; candles, 75c."

Old timers of Cariboo's golden days will remem-



(Photo by

Steele & Co., Macleod.)

THE CROW'S NEST RAILWAY—GENERAL VIEW FROM ST. MARY'S BRIDGE SHOWING FIVE BRIDGES.

\$720; during week ending 3rd September, \$4,320, or 240 oz.

No. 9.—Twelve men employed; yield per day, \$200; during week ending September 3rd, \$1,200, or 66½ oz.

No. 10.—Four men employed, rocking; yield per day, \$133; during week ending September 3rd, \$798, or 44½ oz.

Ordinary claims pay from \$20 to \$30 a day to the hand.

Such was the report made by the Colonial Agent at the time, and it will be agreed that returns of this kind were amply sufficient to inflame the mining adventurers of the day.

In a curiously interesting book, which I would

ber that these prices were very little if any lower than prevailed at the same time in the northern country. Times on Wild Horse, even for laborers, were pretty good, the prevailing wages in 1864 being \$7 per day, and the price of provisions enabled them to live well for \$1.50 per day. But those times have passed, and the miner of to-day, while earning less than half the wages, has a more permanent job on hand and a better supplied camp.

In the fall of '65 the Blackfoot excitement caused something of a stampede from Wild Horse, and many more of the miners were attracted to Big Bend in 1866 by the reports of rich discoveries there, but these placers have continued to be worked steadily ever since. The silent and lamb-like Chinaman,

with the "smile that is childlike and bland" is ever to be seen plodding away, content, as he will tell you, to make his 'two bittee' a day at his diggings, though it is shrewdly suspected that they pick up a good deal more than two or four bits a day, for the "Heathen" is always credited with lying when he tells you the product of his "washup." Of recent years, however, the work on the Creek has been chiefly done by hydraulic appliances, and works of considerable magnitude have been put in. Among the illustrations given in connection herewith is a photograph which gives a very clear idea of the general appearance of Wild Horse in the locality where the bulk of the gold was taken out in the early

tremely picturesque, and one can scarcely conceive of a more delightful spot for a mining camp.

The construction of the Crow's Nest Railway from Lethbridge in the Northwest Territories to Kootenay Lake, has opened up a great mineral country, and mining development in the future will go on with leaps and bounds. The railway itself presented fewer natural obstacles from an engineering point of view than any other railway line that crosses the great mountain ranges of the west. The gradients on the road are extremely light, and the roadbed for the greater part of the distance as perfect as would be found on the open prairie. The primary object of the construction of the road at the time it was com-



(Photo by

Steele & Co., Macleod.)

CHOO CHE WAH COMPANY, (CHINESE) HYDRAULIC PLACER MINING, WILD HORSE CREEK, NEAR FORT STEELE, B.C.

sixties. The scene shown in the photograph lies on the east banks of the creek, and shows the workings of the Quong Yung Tong Company, a Chinese enterprise, which is being carried on with a good deal of vigour and energy. Just below these workings are those of the Nip and Tuck Gold Hydraulic Mining Company, of London, Eng., and on the opposite or west bank of the creek lies the property of the Invicta Gold Mining Company, the most extensive operation on the creek. There are other works being carried on, notably a big contract of tunnelling some distance further down the stream, where it is believed the original bed has been filled up by a deep accumulation of drift from the adjacent mountain side. The scenery on Wild Horse Creek is ex-

menced was the opening up of the great coal measures of the Crow's Nest Pass—a coal area whose extent is scarcely surpassed in the world. This coal was needed for the promotion of the smelting industry in the interior parts of the Province, and when it is known that coal and coke from the Crow's Nest mines are now being supplied at the smelting centres of Nelson and Trail for about one-half of the previous cost, the importance of this railway to the mining industry generally will be apparent. The extent of the coal measures is enormous, the quantity of coal contained in them far exceeding the powers of human comprehension. The coal seams, so far as explored, lie chiefly on Coal Creek, a tributary of Elk River, and on Michel Creek. On Coal Creek

(where the measures are known as the "Elk River Series") there are twelve seams of coal lying one above the other, aggregating a total of about 150 feet in thickness in 900 feet vertical coal measure. It is computed that in this series alone there is an available supply of 18,000,000,000 tons. That amount of coal would fill railway cars enough to make up a train that would girdle this world of ours three hundred times. And that is only a part of the coal resources of the Crow's Nest Pass. It is clear, therefore, that the Province is not likely for some time to suffer from a scarcity of fuel.

The Dominion Government granted a subsidy of \$11,000 per mile to the Crow's Nest Railway so that

coal measures) lies at the junction of Elk River and Coal Creek, about four miles up the valley of which latter stream the present workings of the coal company are being carried on. Most of the mine employees live at Fernie, thus centreing quite a population at that point, and the town is building up rapidly. A spur of the railway runs from Fernie to the mine, the men going out in trains in the morning and returning in the evening. At Fernie some fifty beehive coke ovens have been built, and the number is to be increased to 200 or more as the demand for the product is increased. Each of these ovens has a capacity of one long ton of coal. The coal is precipitated into the ovens by drop-bottom cars, which



(Photo by

Steele & Co., Macleod.)

CRANBROOK, B. C., FROM COL. BAKER'S GROUNDS.

this fuel supply might be tapped, but when it was giving the people's money away it made a wise provision that the people's interests both in the operation of the coal mines and the railway should be safeguarded. The coal company is bound to sell its coal for \$2 per ton at the mouth of the mine, and the Government reserves for itself the right to fix the rate for transportation—both freight and passenger. It needs, therefore, only a Government that is willing to do its duty to avoid the irritation on the part of the people on account of excessive and discriminatory railway charges that have occurred in other parts of the Province.

The town of Fernie (so called in honour of Mr. Wm. Fernie, one of the original discoverers of the

carry it directly from the mine, thus minimizing to the greatest degree the cost of handling. The seams of coal at the mine lie flat, and in the most advantageous position for cheap working. The mining analyses of both the coal and coke that have been made and published show that so far as quality is concerned it ranks equal to any similar product in the world, and is equalled by only a few others.

	Volatile Matter.	Fixed Carbon.	Ash.	Total Fuel.
No. 2 Tunnel—Coal Creek. . .	21.02	76.25	2.73	97.27
“ “ “ “ . . .	25.00	72.50	2.50	97.50
Peter Seam—Martin's Creek	34.70	58.30	7.00	93.00
Jubilee “ “ “ “	31.70	68.50	4.10	95.80

The coal that is at present being mined is strong and stands handling and transportation well. It

might almost indeed be called a semi-anthracite. The coke produced is pronounced of first-rate quality, equal to British and superior to any produced elsewhere in the West.

But the chief hope of the country—and indeed the prospect is a rosy one—is in its quartz or lode mining. It is not my intention to go into any lengthened technical description of the various properties that have been more or less opened up, but generally to indicate the character of the mineral deposits, and to describe in brief outline the work that has been done and the "showings" increased on those properties which have undergone the greatest amount of development. The present year is bound to witness a great deal of activity in South-East Kootenay, and

St. Mary's River from Fort Steele. It was located in 1892 by Joe Bourgeois, who is famous also as the locator of the War Eagle, Centre Star and others of the great mines of the Rossland Camp. The one is a galena, which lies in great masses and has now been considerably explored by shafts, drifts and cuts. The assay value runs about 50 oz. silver to the ton and 20 per cent. lead. Some 7,000 or 8,000 tons have already been sent to the smelter, being transported in waggons or sleighs to a landing on Kootenay River, near Fort Steele, whence it is taken by steamer to the railway at Jennings, in Montana. A small force of men has been kept working constantly for development purposes, while the main body of the ore has been left standing awaiting cheaper transpor-



(Photo by

BULL HEAD, B. C., LOOKING WEST FROM SUMMIT LAKE, CROW'S NEST PASS.

Steele & Co., Macleod.)

no sooner will the snow have left the hills (which will be ere this article appears) than the agents of capitalists will be flocking into the country to see what its capabilities may be, and to pick up desirable properties wherever they may be found. I may say generally that there is scarcely a mountain or hill, scarcely a stream or rivulet, west of Fernie, where mineral locations have not been made, and in many place immense areas have been "staked" and are now on record. Gold, silver, copper and lead are the prevailing minerals, but the silver-lead "propositions" are those which have been so far most actively worked, though prospects of great copper properties exist in numerous localities.

The most famous mine of the district is the North Star. This mine lies some twenty odd miles up the

tation. A branch of the Crow's Nest Railway is to be run in to the mine this year, which will provide the necessary facilities. This great mine is owned by a company of Canadians, who also own 10 or 12 of the adjacent claims. It is popularly believed that the North Star will prove one of the greatest silver-lead mines in British Columbia.

Another promising silver-lead property is found in the Sullivan group, consisting of the Hamlet, Hope and Shylock claims, situated on Sullivan Hill, about a mile and a half from the North Star, on the northeast side of Mask Creek. It is owned by a Spokane Company, and recent rich strikes that have been reported have brought it prominently into public attention. A considerable force of men are now at work on the property. The assay value of the ore is not as great

as that of the Star, but immense bodies of it are reported recently to have been uncovered.

The St. Eugene mine, situated high on the hills, back of Moyie City on Moyie Lake, is recognized as unquestionably a great silver-lead property, one that will rank probably with the biggest in the province. This mine, as well as a neighbouring one, the Lake Shore, have already become shippers.

The original discoverer of the St. Eugene was an Indian, who brought samples of the glistening galena to Father Cocola, who for many years has been in charge of the Roman Catholic Indian Mission in the district. The Indian conveyed the Rev. Father to what has now turned out to be a great mine, and

and completeness of equipment as would be a credit to any city in the Province. It is open to receive patients of any religious denomination throughout the whole district, the nursing being done by the Sisters of the Mission. The Mission lands are extensive, and by means of a system of irrigation excellent crops are obtained. The Dominion Government Indian Industrial School is located on these grounds, the Sisters officiating as teachers.

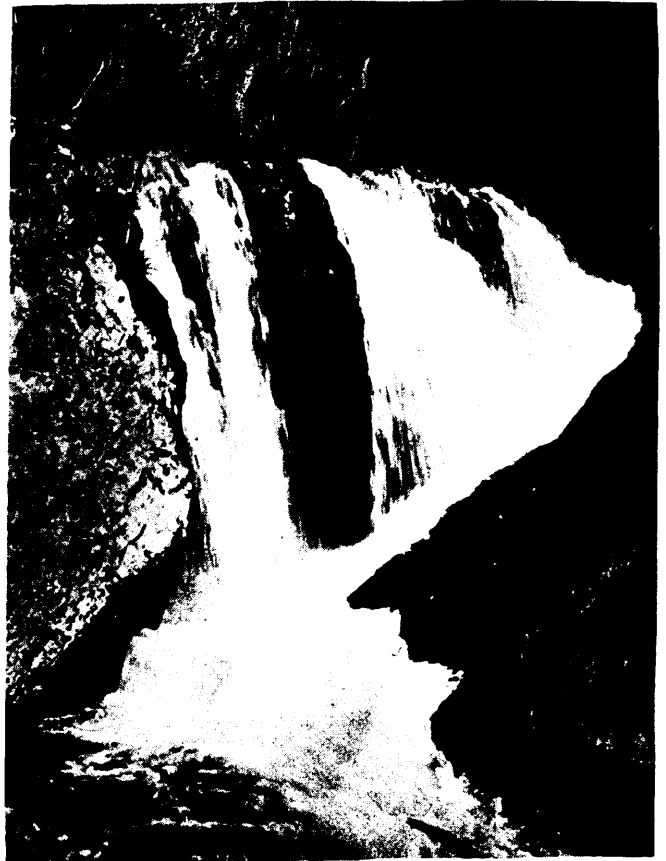
Of the multitude of mines, or rather mining prospects, which dot the hills and valleys of this district from one end to the other it is impossible to speak in detail in an article such as this, which is intended simply to take a passing glance at the salient features



(Photo by
THE FALLS ON ELK RIVER, NEAR ELKO, B.C.

the ground was staked and recorded. The Indian was preserved in his share and Father Cocola in his. When the property was eventually sold to the present owners, Father Cocola received \$7,000 as his "divvy," and this sum, with a zeal and self-denial worthy of the man, he has since expended in the building of an extremely pretty church edifice at the Mission grounds on St. Mary's River, eight miles west of Fort Steele.

I cannot withhold a word in praise of this faithful and self-sacrificing missionary. He has obtained the confidence and even affection of the Indians to a remarkable degree, a result of course of his devotion to their interests. His industry and perseverance in their behalf is unflagging. At the Mission he has not only provided large and comfortable buildings, but last summer succeeded, with the aid of the railway people, in erecting a hospital of such proportions



Steele & Co., Macleod.)
CAVE FALLS, SOURCE OF CROW'S NEST LAKE, C. N. P. RY.

of a great district which is now being opened up and made readily accessible to the energy and enterprise of the people.

Our illustrations indicate in a most vivid manner the natural beauty of the landscape. Could anything be more delightfully romantic than the scene on Elk River, and it is a scene characteristic of the whole district. The writer and a companion, one lovely morning last summer, each mounted, as the "Riders of the Plain" would say, on the "hurricane deck of a cayuse," started on a ride from Fort Steele to Elko, situated adjacent to the view on the Elk River shown in the engraving. The route via Wardner (where the railway crosses) on the west side of the Kootenay River over a road of twenty miles was selected, thence, crossing the stream on a cable ferry, 35 or 40 miles on to our destination. It is a parklike country the whole way, the roads are almost perfect, and

nothing could exceed the beauties that were spread out on every side. We were out on a fishing expedition and our journey was rewarded with the finest basket of mountain, silver and rainbow trout I have ever seen. It is ideal water for the angler. Down it comes tumbling and breaking and eddying, swirling into the loveliest pools imaginable, and each of them apparently alive with fish. There is little or no undergrowth on the banks to interfere with the free play of the rod, and often before the fly had really touched the water it would be snapped up by eager trout, darting a foot or more into the air to seize the treacherous bait. The average weight of the fish would be fully a pound and a half, while some would scale

the beautiful Moyie Lakes, some thirty miles west of Fort Steele. Here the sportive trout are found in great abundance; boats and other accessories to a pleasurable outing are to be obtained, and excellent hotel accommodation is to be had at the pretty little town of Moyie, situated at the western end of the lakes. The Crow's Nest Railway skirts the water, and a little steamer is constantly plying from one end of the lakes to the other.

Now, a word about the game of the country. Grouse, ducks and geese are plentiful almost everywhere, and to those who are looking for big game there is abundance to draw out the hunter's adventurous spirit. The black bear, the cinnamon, and also



(Photo by

DEWDNEY PACK BRIDGE, ELK RIVER CANYON, NEAR ELKO, B.C.

Steele & Co., Macleod.)

three and three and a-half pounds. The Elk River, over almost the whole of its course, including the upper lakes, of which our illustrations give an idea, is a veritable angler's paradise. Returning to Fort Steele from the particular excursion which I have mentioned, we spent a day on Bull River, which flows into the Kootenay at a point fourteen miles or thereabouts south of Steele. Whipping this stream for a distance of five miles upward from its mouth we found the sport almost equally as good as on the Elk, though the fish were smaller, a condition attributable, no doubt, to the fact that it has been more frequently visited by anglers. While on the subject of fish, I should mention that perhaps the most favourite resort of the devotees of the rod and line are

the ferocious grizzly, all have their habitat here, and in the rocky fastness of the hills is to be found the coy and illusive mountain sheep and goat. In years gone by it has cost an arduous journey by boat and on horseback, or on foot over the trail, to reach the hunting grounds of this great district, but now an easy and pleasurable journey over the Crow's Nest Railway carries the sportsmen into the very heart of it, and little or no hardship need be undergone, and at a sacrifice of comparatively little time, to enjoy oneself to one's heart's content in the forests and on the trout streams of South-East Kootenay.

Of the splendid future of all that country along the line of the Crow's Nest Railway from the western prairies, beyond the Rockies, to the shores of Kootenay

may Lake, there can be no question. It has already been shown to have exceptional mineral wealth, and what has been shown is only a beginning. Comparisons are sometimes made of the prospective mineral development of the Southern East Kootenay with the ascertained richness of the mines of her sister district of West Kootenay. But these comparisons are useless. The Crow's Nest country will within a few years support a thrifty mining population of many thousands, enjoying a climate and other natural conditions conducive in as great a measure as possible to the enjoyment of life. It will

deed, I may conclude by saying with the poet :

"The future rises fair to view,
Charming with morning's youthful dew,
And bright with coming glory."

WEST KOOTENAY POWER AND LIGHT CO.

(By Horace F. Evans, Rossland, B.C.)

WHEN it was announced some two years ago that a project was organized to harness with iron bands Bonnington Falls on the Kootenay River



BONNINGTON FALLS POWER PLANT—SHOWING TAIL-RACE.

soon equal probably any of the most thrifty of the mining communities of the United States. That a great smelting industry will centre itself at some point along the Crow's Nest Railway is assured by three natural conditions—first, abundance of coal; second, the presence in close juxtaposition of the necessary "dry" and "wet" ores to permit of economical smelting, and third, unexcelled facilities for the shipment to market of both the refined and the crude products of the mines. Could anything better be looked for or wished for in a mining country? In-

it was contended by a considerable number of very intelligent persons as belonging to the class of schemes that we hear about but never see because it was mentioned that the power represented in the fall was to be transmitted a distance of thirty miles to Rossland by electric wires.

It was well known that Niagara Falls had been captured and so utilized, hence why should not Bonnington Falls, or any other falls, be put in harness. What materially increased this element of doubt at the time was this: The names of the parties mentioned in

connection with the enterprise, though well known in relation to mining projects, were not previously identified with electrical ventures. This fact, doubtless, accounts for the fears that were expressed at the time of the first announcement.

Now that power and light have been so trammelled from Bonnington Falls for some months, and that the system has come to stay, it is unnecessary to dwell any further on the query, can it be done? It has been done and this should settle the matter.

Bonnington Falls are situated on the Kootenay River, which is 400 feet wide at that point, and the

that company, at Rossland, and Mr. C. R. Homer, of the Canadian Pacific Railway Telegraph Service. It was Mr. Largey that first obtained the charter, and he subsequently transferred it to the West Kootenay Power and Light Company.

Now it naturally occurs to the unscientific reader to make some inquiries about this transmission of water power by means of electric wires a distance of thirty miles. It does not look reasonable, but it must be so, because it has been done.

Some years ago Professor —— was teaching an "academy" in the wire grass country of South Geor-



BONNINGTON FALLS—INTERIOR OF GENERATING STATION.

water falls over a granite cliff, a distance of 50 feet.

The conditions are most favourable for the system. Scenery, which is only sentimental under the circumstances, is, however, not wanting. The Selkirk Mountains rise to an elevation of upwards of 3,500 feet, and the river itself is about 2,200 feet above sea level. The snow-clad peaks of this range add very much to the scenic grandeur of the environment.

The consummation of this scheme of utilizing the water power at Bonnington Falls is largely due to Sir Charles Ross, Mr. Patrick A. Largey, late president of the Centre Star Mining and Smelting Company, Rossland; Mr. Oliver Durant, late manager of

gia when he was one morning waited on by the trustees, who informed him that they did not wish the scholars to be taught "stronny" and stuff like that. The professor invited these sublunary mortals into his class-room and draw a diagram on the black-board representing the solar system. "Now," said he, by way of explanation, "the sun is just ninety-five million of miles from the earth." "Stop," said the chairman of the trustees. "How do ye know that. What surveyor ever dug his drain over that route? Tain't so." "We did stop," said the professor, "wiped the diagram from the black-board with our left coat tail, advanced the class to Peter Parley's new geography

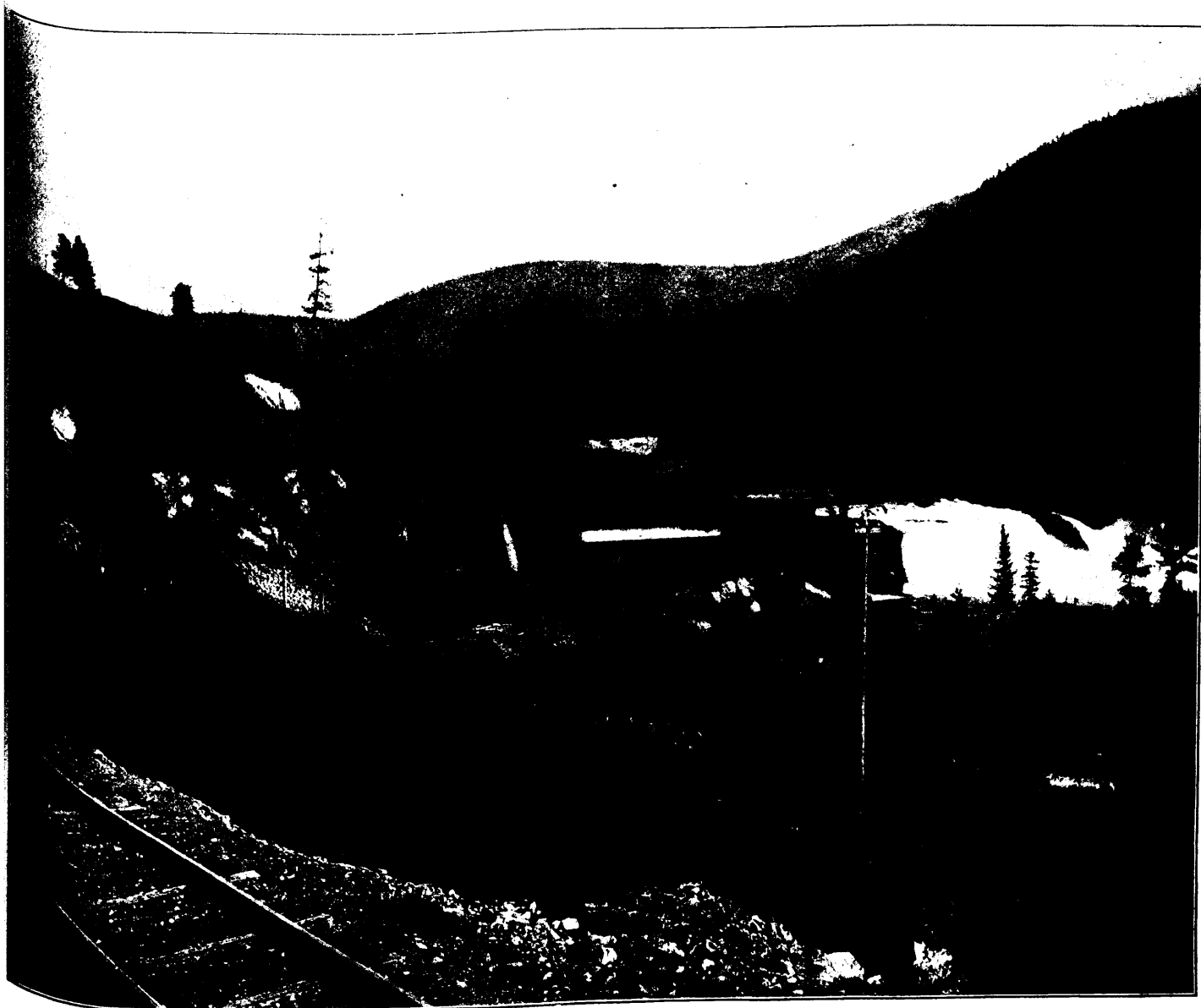
and permitted the sun to rise and set as usual, and left the district." Had this South Georgian been present when the question of transmitting power over Bonnington Falls to Rossland was raised he would have declared that it was not possible. Such men only make the scientist get along at a quicker rate. Trevert says that until the invention of the dynamo, the electric battery was the only known generator of the electric light and it required a battery of 40 to 50 Grove cells to produce a strong light that would last but a few hours.

Since 1867 electricity in the service of man has

about it, but he pretends he does! How like some men!

The first surveys of this plant were made in 1897, but construction did not begin until July of that year. The present plant, which gives twenty horse power, is only one-third of that which it is intended to give, viz.: 60,000.

The power house is located on the west side of the dam. The foundations are built of cut granite, the walls are of brick, the roof of wood, and it is covered with galvanized iron; the station is 40 x 60 feet outside measurement, and gives accommodation for two



GENERAL VIEW—BONNINGTON FALLS POWER PLANT—KOOTENAY RIVER, W. K.

made rapid strides, until to-day we see long lists of motors and dynamos, which, to the uninitiated are very queer looking machines, and we are apt to regard them first at a safe distance, until the electric engineer assures us that they are "perfectly harmless."

What the majority of persons do not understand is how these queer-looking black combinations of iron, steel and copper can transfer the power of water to a bit of wire and then transmit it a distance of thirty miles over an extension of that wire.

To the electric engineer it is as plain as A B C, but the average man who wants to feel up to date says, "Yes, I see, etc.," and yet he does not know anything

725 K W and one 1,200 K W units directly horizontal wheels. Height of building is 40 feet.

The dam extends across the end of the canal for a distance of 60 feet. The wing dam extends for 120 feet and is constructed of concrete, forming one side of the fore bay, extending the full width of the dam. The water after passing through this enters the penstock and from the penstock flows to the water wheel.

From the main water wheel casing there is toffed a 26-inch pipe, which conveys the water to a 50 horse-power horizontal wheel which is utilized for running the exciter. The head has a maximum of 42 feet and a minimum of 34 feet.

WATER WHEEL.

The main water wheels for this plant were furnished by the Stillwell Bierce and Smith Vaile Company of Dayton, Ohio, and are of the well-known Victor type. There are two pairs of 39" horizontal wheels in each case, which are connected directly to each generator shaft. These wheels are designed and guaranteed to develop 1,180 h.p. per set. In addition to the wheels just described there are two pairs of 12-inch wheels of the same manufacture used in operating the exciters for furnishing the exciting current to the three phase generators in the station. The governors were also furnished by the Stillwell Bierce and Smith Vaile Company, and are of the Geister type, driven by a belt connected on a small pulley on the water wheel shaft. Each governor operates the gates for each set of two wheels.

APPARATUS.

All the electric apparatus has been manufactured by the Canadian General Electric Company. In the generating stations there are two 75 K W three phase generators of the revolving field type, having 40 poles and operating at a speed of 180 r.p.m. in going frequently approximately to 60.

The pole pieces field coils and armature coils are arranged in such a manner that the windings may be easily removed without disturbing the armature or the magnet yoke. The field windings are wound in brooms and thoroughly insulated with oiled liners.

The bearings are of the self-oiling, self-aligning type, and the sleeves of cast-iron, lined with genuine vabut metal. The base frame of these machines is soon constructed that the armature may be moved parallel with the shaft in order that the field and armature may be repaired without tearing down. The approximate weight of the revolving field is 27,000 lbs., the complete weight of each machine being 96,000 lbs. The generators are designated as A. T. 725-180 sunt-wound 1,100 volt generators.

The current is generated under a pressure of 1,100 volts, and is conducted from the generator to the machine panels, and from the machine panels to the transformer panels, it is conducted to the primary side of the transformer and slipped up to either 11,620 volts when delta connected or 20,100 volts when Y connected.

From the high tension side of these transformers, the current is conducted to the high tension switches on the transformer panel, passing from there to the line panel and thence to the line.

The transformers are of the of the air-blast type of 242 K W capacity each. At present there are two sets of them, which is ample for present purposes. As a means of ventilating two 60" Buffalo blowers are used, the air from these being conducted through brick air dints to the transformers. The power house is fire-proof.

THE POLE LINE

is a very substantial type of construction, being of round timber of specially selected cedar. The poles vary from 30 to 40 feet in length, according to location.

They are set 100 feet apart or 50 to the mile, all corners and curves being properly grouped throughout the whole route, which is heavily wooded. The construction of the pole line embodies all the best features of the most improved practices in transmission work.

A single three wire three phase circuit of No. 2 medium hard-drawn copper of Dominion Wire Company's manufacture extends from the power-house to the sub-station at Rossland, a distance of 30 miles by the pole line.

The telephone line, placed four feet below the lower cross-arm, is of the No. 12 B. & S. hard-drawn copper transferred to every pole. The insulators used are of the type C and Redland, while the pins are locust boiled in parafine.

SUB-STATION.

In the sub-station is installed a full complement of transformers similar to those already described. These are wound for a secondary voltage of 2,200, it being the company's intention to distribute at this voltage and step down a second time where a lower voltage is required.

The armature is of the stationary type and thoroughly ventilated by means of air ducts one-quarter inch wide.

In the sub-station there is installed the necessary high tension switchboard apparatus, as well as the 2,200 volt distributing board. On this distributing board is mounted total output ammeter and volt meters for the different outgoing circuits.

The switch boards throughout are composed of blue Vermont marble panels of the Canadian General Electric Company.

The plant has now being in operation for the past nine months, and although subject to severe thunder storms, not the slightest difficulty has presented itself when working under a pressure of 22,400 volts.

Lightning discharges have frequently entered the generating and sub-stations, but these intruders were promptly taken care of by the banks of the well-known West Lightning arrester installed.

DOUBLE CAPACITY.

The company is at present doubling the capacity of its plant at Bonnington, which, when completed, will consist of the following apparatus:

- 1 pair 45" Victor surtine water wheel.
- 1 12" Victor surtine wheel.
- 1 1,000 h.p. generator.
- 1 40 h.p. exciter.
- 1 3,000 h.p. capacity in step-up transformer, with necessary switchboard apparatus.
- 2 2,000 h.p. capacity in transformers at Rossland distributing station.

The company are supplying power to the following capacity of motors at Rossland and Trail:

War Eagle Gold Mining Company.....	1,000	H.P.
Bullion Extracting Company.....	150	"
Big Three	100	"
Iron Mask	130	"
Gertrude	50	"
B. A. Corporation	600	"
City of Rossland, in lights	300	"
Trail Smelter	450	"

On the ground of the Idaho mineral claim and close to the line of the Nickel Plate on the east side of Centre Star gulch, a fine brick building, with granite foundation, about a year ago was erected. It is close to the new trestle work of the Canadian Pacific Railway Company. This building is the Rossland sub-station. Its dimensions are 32½ feet high, and is of the typical character of the West Kootenay Power and Light Company's power-houses.

MINING MEN OF THE PROVINCE.

MR. J. CUTHBERT WELCH, chief assayer at the Trail smelter, was born in Wednesbury, Staffordshire, and educated at Walsall Grammar School and at the Midland Institute, Birmingham. After gaining several government certificates for proficiency in assaying and chemistry, he secured a position of assistant to Messrs. Allen & Bergley, the Birmingham metallurgists and assayers, then devoting much time to experimental work for researches and analysis of alloys and minerals containing the heavy metals. In 1886 he obtained a studentship at the Royal College of Science, with which is associated the Royal School of Mines, but in the following year he resigned this charge to accept an appointment as Research and Technical chemist to Dr. E. R. Moritz, of London. In January, 1888, Mr. Welch, at the instance of Dr. Moritz, became chemist to Messrs. H. & Leemonds, of Reading, also lecturing for the Berkshire County Council in 1891-92, and carrying on a private practice as consulting chemist and metallurgist. In 1895 he was engaged as technical chemist to the Reading Paint Company, but two years later, for family reasons and acting upon a long unfulfilled inclination, coupled with the desire to devote himself entirely to metallurgical work, decided Mr. Welch to leave England for British Columbia. His first engagement in this country was as chemist and assayer to the Kootenay Ore Company's Sampling Works at Kaslo, but upon being offered the post of Research chemist and assayer to the British Columbia Smelting and Refining company at Trail, he resigned the former position in August, 1897. On the acquisition of the Trail smelter by the C. P. R. in the following spring, Mr. Welch was appointed chief chemist and assayer at the company's works. Mr. Welch has contributed largely to the chemical literature of the day, among his chief works being the compilation of a general index to the "Proceedings of the Society of Public Analysts," Vol. I.,

and an index to the "Analyse," Vols. I. to XX., 1876-1896, published by the society in 1897. He is a Fellow of the Chemical Society, member of the Society of Public Analysts and Society of Chemical Industry.

GREATER BRITAIN.

(From Our London Correspondent).

IN THIS great city of London we have come to look forward year by year to the imposing exhibitions at Earls

Court as affording possibilities of relaxation to those who are for their offences compelled to stew in town during the hottest months of the year. Quite apart from their value as sources of amusement and entertainment, however, these exhibitions are frequently used as a means of education, and the one just opened is especially deserving of praise, in view of the enthusiasm with which the Imperialistic doctrine has been taken up by every member of the vast Empire, which acknowledges as its supreme head the lady who has just completed her eightieth birthday. For does it not bring us in close touch with the farthest points of that great region which is proud to call itself Greater Britain; teaches the manners of living of the natives whom we are called upon to take into the fold, to show us in practical form the various productions of the many component parts which make up the great whole—animal, vegetable and mineral. I have already sent you a lengthy account of the *raison d'être* of the mining exhibition, and also a map showing the large area taken up by the mineral exhibits, machinery, etc., and am now by the courtesy of Mr. Austin Breveton, the press representative of the Exhibition, enabled to supplement these by fuller details. Before doing so let me once more regret that the British Columbia government were not able to embrace this splendid opportunity of showing us what she can do as a producer of both the precious and baser metals. I know it



MR. J. CUTHBERT WELCH.

is proposed to atone for this by a grand display at the Paris Exhibition next year, but although there is little doubt that thousands of Englishmen will visit that *fin de siècle* commemorative celebration—if the Dreyfus question allows it to materialise. Yet it is a mistaken policy, if not another illustration of the shortsightedness which places about \$1,000 at the disposal of a London agent to properly advertise the Province for a year—a sum which is the exact price of a single page of one of our leading financial daily newspapers. In conducting a government as a business it is often necessary to "throw a sprat to catch a mackerel." British Columbia's executive apparently thinks that a sprat is too big, and that a much tinier bait ought to bring them a much larger fish as a prize, which is a sad

exhibition of the ways of Canadians. However, I suppose it was all carefully debated, both in the federal and provincial cabinets, and so we must content ourselves with stating that the Honourary Advising Committee includes among its Vice-Presidents, the Hon. Sir Charles Tupper, and a number of other gentlemen not unconnected with recent Canadian mining developments, and emphasize the remark by pointing out that the Australasian and South African colonies have generously supported those who have been labouring to make the exhibition what it should be, an object lesson as to the mineral wealth of the British Empire. Only Canada is officially lacking in enterprise, and the reflection is on those Canadians who essay to govern Canada. Excessive economy is often well nigh as harmful as undue prodigality!

Greater Britain! The words conjure up all kinds of visions of far off lands, and varied peoples: of tropical climes, and arctic regions. One feels tempted to run away from the subject in hand, and launch out on a sea of speculative problems as to the developments in the next century of that great Empire on which the sun never sets. As it is, I remember that this is a mining magazine, and not a record of colonial ambitions or achievements, and that while useful in themselves, British Columbians will be far more interested in a new mining implement, or a metallurgical process, than in many pages of statistical date and phantastic dreams of the future of this country and her vast possessions over seas.

Although the original intention of the Incorporated London Chamber of Mines—the real originators of the mining part of the Greater Exhibition—was of course to have all the exhibits under one roof if possible, it was found convenient to join the Greater Britain authorities, and as the plan was unfolded, the colonial governments recognising its utility, decided to organise their own sections themselves.

Thus we have the Incorporated London Chamber of Mines section, West Australian Chamber of Mines and International Mining section, Queensland Government section, Victoria Government section, Rhodesian Government section, Witwatersrand section, Hong Kong exhibits, West African section, Cripple Creek section, Queensland Government Ore Crushing Mill, Working Gold Mine.

The efforts of those responsible for the arrangements of the mining section (as a whole), have been very ably seconded by the great British South African Co., by South African financiers, and by West Australian companies, and mining people in the colonies generally, and as a result we have a vast, if somewhat heterogenous, number of exhibits. Unfortunately it was found impossible to place all the minerals, machinery, implements, working mine, etc., under one roof, and this makes the task of inspection and classification difficult, but it also prevents those of the public who might be inclined to dodge a common mining centre from shirking their obvious duty, for no matter where you go in this vast patch of London saved from the jerry builder, you come across something or other which helps to drive home to your mind the fact that Greater Britain is a vast producer of gold, ivory, precious stones, as well as silver and the base—*but no less valuable metals.*

Entering the exhibition at Earls Court, the representative of the **BRITISH COLUMBIA MINING RECORD** finds himself in Prince's Hall, devoted to the section organized by the Incorporated London Chamber of Mines, an interview with whose energetic secretary, Mr. E. Jerome Dyer, appeared in a recent issue of the **RECORD**. Here one of the most notable exhibits is a five-stamp battery, which has been put up by the British South Africa (The Chartered Co.), and will treat Rhodesian ores during the continuance of the exhibition. Mr. C. B. Hale very courteously took me round this battery and explained that it was prepared to crush about 200 tons of Rhodesian ores during the six months Greater Britain will run. The attraction of this milling section from an investors point of view is that, as it is intended to treat ores from the various Rhodesian belts, and these will be announced in due course, as well as the name of the particular company, shareholders will be able to turn up and inspect their own property at Earls Court, see it crushed and gold won from the quartz either in the ordinary way, or if refractory, by the cyanide process. This section is very complete and deserves the hearty commendation of those who could expect nothing less from the great Chartered Company, especially after the recent burst of activity in the Rhodesian market of the London Stock Exchange.

Among other exhibitors in this Court are the Frictionless Engine Packing Co., John Davis & Sons, mining imple-

ments: Palsometer Engineering Co., steam pump: Edwin Chester & Co. (London & Renfrew), various mining machinery: Ruston Proctor & Co., winding, horizontal and high speed vertical engines, also flue and table boiler, and portable engines. The Fraser & Chalmers stand was not by any means complete, and when I ran through the court for a second look round before sitting down to write this first report, I found the stands in many cases still in the hands of the workmen. Bowes, Scott & Western show a Wilfley concentrating table, the chief point in which is its simplicity and durability. It is suitable for concentrating all classes of ore, and by its method of concentration—depending on the laws of gravitation—enables one metal to be separated from the other in the process. Robey & Co. have a working scale model of the Robey engine, on wrought iron tank foundations, a working scale model of horizontal fixed hauling engine, a working model of Chilian quartz crushing mill, also working model of concentrator, and 10-stamp head battery. Lendbeater & Scott show mining tools, wire ropes, rope pulleys, corvie and truck wheels, etc. The Tacking Mill Foundry Co., of Camborne, Cornwall, makers of the "Little Hercules" rock drill, are also represented, as well as Holman Bros., working model of Morgan's patent traversing winding engines for deep shafts, with pithead gear. Messrs. Johnson & Sons, the assayers to the Bank of England, H.M. mint, etc., display apparatus and chemicals for use in mines and assay offices. Not by any means the least important exhibits in this Court is that of the Willesden Paper & Canvas Works, of Willesden Junction, viz., waterproof paper for ventilating tubes, piping and numerous mining uses, also for permanent and portable structures; rot-proof canvas for explorers and miners' tents, ground sheets and all kinds of covering. The company has supplied Mr. Stanley, various colonies, as well as the Home Government, and its specialties are securing increasing attention at the hands of mining men who require a light, flexible and reliable substitute for metal tubing for ventilation tubes, conduits, etc. The canvas is water, rot and insect proof. They also show specimens of camp furniture, recommended for use with Willesden tents, made by the Ex-Chair Co., whose aim is to secure maximum strength and durability. I make this lengthy reference to the Willesden exhibit, and especially the canvas, because among hundreds of mining exhibits it is the only one which deals with the material welfare of those who have to undertake exploring and prospecting work in a country where you seem to have both the extremes so far as climatic conditions are concerned.

In the Ducal Hall we find the International mining section, conducted under the auspices of the West Australian Chamber of Mines, and here will be found exhibits representing nearly every branch of the mining industry in that go ahead colony. Specimens of ore, models of mines and works, machinery used, maps and diagrams showing the output of the precious metal obtained to date are all shown in this section. Not the least interesting feature here was the collection of Jarrah timber. The London & Hamburg Gold Recovery Co., Calipe Drill & Boring Co., Wilking & Co.'s wire ropes, Fried Krupp Grusonwerk (Germany), Davey, Paxman & Co., Sandycroft Foundry, Stern Bros. (lubricants), Curtis & Harvey (blasting materials), American Pyrites Co., Cape Asbestos Co., Amette & Co., hand sawing machines, etc., were all represented. The Rhodesian Gold Mining exhibits have a Court all to themselves, and attract a very large amount of attention, as do also the splendid illustrations of Canadian scenery lent by the Canadian Pacific Co. It is also, I understand, the intention of the C.P.R. to shortly show at the exhibition a section of a sleeping car. I was very pleased to see that British Columbia was not entirely overlooked, an interesting collection of specimens of ores, etc., being shown in the International mining section, by the Ymir Gold Mining Co. of B.C. I also understand that a gentleman recently returned from Canada, was so disappointed at finding Ontario unrepresented, that he has decided to take a stand and show his own private specimens, but these could not be discovered when I paid my second visit to the exhibition on your behalf yesterday. Altogether the mining exhibits make a very excellent presentation of mining in all parts of the empire, but owing to the fact that in some sections the stands are not yet quite complete I must defer fuller details to my next month's letter.

Meanwhile, hearing the other day that the Dominion government and several of the provinces are reserving their energies for the great Exposition at Paris in the last year of the century, it occurred to me it might be useful to make some enquiries on the subject. And as when you

want to learn anything about Canada in the city, you cannot do better than apply at the offices of the C.P.R., I dropped in and had a chat with Mr. F. W. Flanagan, the ever courteous city passenger agent, of the vast trans-Atlantic service.

I told Mr. Flanagan I was sorry to find Canada an absentee from Earls Court, and could he give me any reasons for the decision of the federal and provincial authorities not to take part in this year's show.

"No," he said, "I cannot tell you anything under that head, but I think you will find Canada well represented at Paris next year. So far as this exhibition is concerned the C.P.R. have sent some big maps, several pictures of the ranching scenes and about a dozen views of B.C. They also propose to put in a section of a sleeping car. The company hope that the very fine maps they have lent will help to illustrate the bearing that the ports of Vancouver and Victoria have upon travelling round the world in any direction."

"And what about Paris?" "Ah, Paris! well you will be interested to learn that the C.P.R. is going in for big licks at Paris, and Mr. Baker has already a considerable number of designs under consideration for the purpose of that exhibition. He is now considering whether or no to have a whole car for Paris. But whatever may be decided the C.P.R. exhibit will be a most comprehensive one."

And then Mr. Flanagan told me what a lot the C.P.R. had done of late to help bring B.C. before Europeans. Picking up several of the bundles of circulars on the counter, Mr. Flanagan said:

"Look at these circulars. You cannot find one in all those little piles of printed matter which do not in some way or other bring in British Columbia, whether it is a pamphlet descriptive of the rolling prairie lands, or a booklet on Klondike, you will find a reference to British Columbia. Look at the back of our letter paper even. There you have a useful little map with explanatory letter press. The company is spending a large sum in continental advertising this year, and has attracted a good deal of attention by its plan for sending out Swiss guides to the Rockies, which we hope will attract a large number of Englishmen and Continentals who are fond of mountaineering.

"Emigrants. Well there is a very good class of emigrant going out this year, but the figures are not particularly abnormal. Most of the people we meet here are going out to British Columbia in connection with mining interests out there."

A piece of information which will be of interest to those who have been assisting in exploiting the country during the past three or four years. In 1896 British Columbia was hardly a name here, in 1899 it is as well known as the Witwatersrand or West Australia, and if only the government would advertise a little more it would soon be a household word.

THE MONTH'S MINING.

CAMP MCKINNEY.

(From Our Own Correspondent.)

OWING to the bad condition of the road on the Summit, between Penticton and McKinney, the Minne-ha-ha, Waterloo, Fontenoy, Warton and Sailor Companies have been unable to haul their hoisting and other machinery, and consequently the work on these properties during the last few weeks has been practically at a standstill. The very backward season has had much to do with this state of affairs, for there has been hardly a day without rain, hail or snow; at the same time, were a sufficient force of men put on those portions of the road needing repair, much unnecessary delay might have been avoided, and a considerable force of men would have been now working in the above-mentioned properties.

Since my last letter the Waterloo people have had mill tests made of ore taken from the east and west drifts at the 80-foot level, with the most satisfactory results. These working tests were made by Mr. C. M. Fassett, of Spokane, 90 pounds of assay ore being taken from the east drift and 145 pounds from the west drift, the result showing \$37.48 per ore values. A galerus frame has been erected over the shaft, in readiness for the hoist. On the Fontenoy similar circumstances prevail. In the new shaft sunk in this property, close to the Waterloo line, assays as high as \$108 to the ton have been obtained. An 80 horse-power engine, boiler, and 12-drill compressor have been at the Penticton Landing about two months awaiting transportation to the Minne-ha-ha claim. This Company have arranged to put in a 30-stamp mill this summer.

Your correspondent paid a visit to the Cariboo mine the other day, and saw some very rich ore passing from the crusher to the stamps. This ore, coming from the lower levels, is pretty good proof that the old Cariboo is still holding her own. Preparations are being made on a portion of the Company's property for a townsite, the very thick timber having been cleared off and a road laid out to connect with the Penticton stage road.

A large force of men are engaged in clearing and burning the timber on the Sailor townsite. This Company intend making a new and shorter road to Rock Creek, along which the telephone will be constructed. In all probability this road will become the stage road to Rock Creek and all points east of camp, as it will be some five or six miles shorter than the present road.

The 5-stamp mill on the Granite is nearing completion. Some good development work has been done on this property. In addition to two shafts in the vein, a tunnel and open cut have also been run, and as the vein is from six to seven feet wide, there should be no difficulty in keeping the mill supplied with ore. The superintendent informed me that the ore will average about \$26. Should such prove to be the case, this Vancouver Company will be well repaid for their enterprise.

The Little Cariboo and Shannon & Dolphin are temporarily closed down. The latter claim will probably start up in a week or two. The Cariboo No. 2, north of the old Cariboo claim, is taking out some good ore, and in the Pandie, to the north-west of it, a 2½-foot vein of rich ore has been opened. This claim is likely to be heard of in the near future.

The Ecuador, belonging to a Toronto company, about two miles east of the Cariboo, is showing some very good ore, four or five men have been working for the last two months, and the development has proved most satisfactory. This claim is situated some 1,500 feet west of the Gold Standard, belonging to the Lemon Company, of Omaha, on which is a hoist and a 140-foot incline shaft. Samples of ore from this property assaying from \$50 to \$70.

A strike of free gold ore was recently made some three to four miles east of the camp, the ledge being very wide, over 30 feet, and presumably a continuation of what is known as the east or back ledge of the Old England claim. The discoverers, Messrs. Hamilton and Gresslin claiming they can get gold in every pan.

The general outlook of the camp is exceedingly good, and though doubtless the more rapid development of some of the properties has been retarded for want of machinery, the work which has been done during the spring has placed beyond doubt that there are some valuable properties in the camp, and this time next year will see more dividend payers than the Cariboo. The "wild cat" boom which struck the camp during the winter months has flattened out, and none too soon, in the interests of those having properties showing some merit, and on which legitimate work has been done. The "wild cat" promoters appeared sublimely indifferent to development work, surface showings, etc., in fact didn't seem to care whether the property had a vein on it or not, if only it were near enough to the Cariboo to enable a good draughtsman by the exercise of his imagination to show it to be on the same lead. These gentry have undoubtedly somewhat injured the reputation of the camp, more particularly among the speculating public, who in racing parlance like to have a "little bit on," and invest readily in the "cheap and nasty" stock, while the regular mining man have let such "sure things" severely alone. It is presumably the fate of every mining camp to go through a like experience at some period of its existence, fortunately for McKinney the principal properties are in the hands of strong financial companies, who will thoroughly test their values.

BOUNDARY CREEK.

(From Our Own Correspondent.)

Although no boom is on at Boundary Creek, there is a deal of development going on, this latter making for the material progress of the district. Power plants are being gradually increased, more men employed, and railway construction is being pushed steadily forward. It is doubtful though, notwithstanding positive assertions made to the contrary by railway officials, if the railway will be open to Boundary Creek before winter. Yet the definite assurance that the provision of adequate transportation facilities can now be only a question of a few months is having a beneficial influence, with the result that from twelve to twenty mining properties in the district are being got into shape for shipping ore. The eight hours' law has not yet seriously affected the district, for the reason that the mine-owners where machine drills are employed decided to continue to pay \$3.50 to machine men and \$3 to muckers. In two or three instances though, work

has been suspended where the decision to pay hammersmen only \$3 has been carried into effect; but as it is unlikely that work will be resumed upon the several properties affected until after machine drills shall have been provided, there will probably be no contention between owners and miners on this score.

In so extensive a district, including at least a dozen mining camps within a radius of ten miles of a central point, it is difficult to keep track, except at considerable expenditure in time and money, of what work is going on and what results are being obtained. Consequently the following notes are necessarily incomplete. They will, however, serve to show that the mineral industry is surely, if slowly, advancing in importance in the district.

At the Mother Lode, in Deadwood Camp, work is being continued as usual. The drift at the 200-foot level has been extended about 300 feet north from the shaft, and is now about half-way to its objective point directly under the old workings, to connect with which an upraise of about 175 feet will have to be made. The south drift is in about 75 feet. It is understood that matter for an illustrated article descriptive of this valuable property will shortly be supplied to the RECORD by a thoroughly reliable contributor. The Sunset group—Sunset, Crown Silver and C.O.D.—has been acquired by the Montreal-Boundary Creek Mining Company, organised lately in Montreal by Mr. W. L. Hogg, and capitalised at \$2,000,000. The main shaft on the Sunset is down 182 feet, and both the main ledge and a blind lead have been crosscut at that depth. A tunnel has been run in on the south side of the claim, and from this tunnel a 60-foot winze has been sunk. The ledge has been crosscut at different points, and 70 feet of ore met with, values ranging up to \$17.60. A temporary hoist is expected to arrive shortly, and a similar power plant to that on the Boundary Creek mine has been ordered to come in when the railway shall have been opened to Boundary Creek. The grade for the spur railway line from Greenwood to the Sunset and Mother Lode is already forward.

The Morrison is reported to have made another strike, and it is stated that the Great Hopes Gold Mining Company intends to resume work on the Great Hopes claim, Deadwood camp. A vertical shaft has already been sunk about 100 feet on this claim, but the ledge has not yet been cut at that depth. The surface showing is an excellent one, and it is very probable that a crosscut from the bottom of the shaft will meet with the ledge at that depth. Messrs. Hector McRae, of Rossland, and Lionel H. Harris, of London, the latter connected with the London and Canada Syndicate, Ltd., which holds a controlling interest in the Boundary Creek Mining & Milling Company, Ltd., of Greenwood, were recent visitors to Boundary Creek. It is intended to shortly do some work on the Company's claims with a diamond drill, which is now on the way in. It is understood that a larger company is to be formed in London to take over the B.C.M. & M. Co.'s mineral claims, leaving the township of Boundary City, near Greenwood, for the local company to deal with.

There is not much doing in Providence and Skylark camps just now. Several claims near the confluence of Eholt and Boundary Creeks are doing work. The Last Chance, in Skylark camp, is to be equipped with a steam plant, and two or three neighbouring claims controlled by Spokane companies will shortly have men at work on them. Smith's camp remains practically idle. Copper camp has some development work going on, but little is heard as to results. In Graham's camp, near Midway, a tunnel is being slowly driven on one claim of the group owned by the Graham Estate, Spokane, and the Lygia, owned by Messrs. W. H. Norris and James Beckwith, of Midway, is opening up in a promising manner.

The work in progress on the Old Ironsides, Victoria and Knob Hill claims, in Greenwood camp, is chiefly drifting on the ledge and sinking the Old Ironsides No. 2 shaft. These properties adjoin, are under the same management, and together have a pay roll of about 70 men, with a prospect of an early increase in numbers of the working force. The No. 2 shaft referred to was, early in June, down about 270 feet. It is situated on the east side-line of the claim, about equi-distant from the north-east and south-east corners. It is connected at the 200-foot level with No. 1 shaft by a 300-foot crosscut, which passes through 83 feet of ore, the remainder being through ledge matter. There are also two drifts at the 200-foot level, one running south for 200 feet and the other north for 150 feet. Both are in ore all the way, and are near the footwall, though not on it. Crosscuts are being run east and west from these drifts to cut the walls of the ledge. No. 2 shaft was sunk for the first 60 feet through good ledge matter, and below the 200-foot level went through 50 feet of ore, stated to assay up to \$36 and to average \$20. There is now a full 10-drill plant on the Old Ironsides, with five machines work-

ing. The mine plant is shortly to be increased by a 50 h.p. hoist, which will be placed at the 200-foot level of No. 2 shaft. A drift from the Old Ironsides along the lead into the Victoria is in more than 150 feet, meeting with some fine-looking copper ore. The work done to date on the Knob Hill aggregates 1,000 feet. This includes a 550-foot diagonal crosscut, an upraise of 135 feet, and the remainder drifting, all being reported to be in ore of assay value. Two machine drills are being worked with power obtained from the Old Ironsides. It is expected that the spur line from the Columbia & Western Railway at Eholt will be completed by November next, the work of grading already being in hand.

Both at the Stemminder and the Brooklyn development work is proceeding steadily, the power plants on both properties facilitating progress. The plant for the Snowshoe, also in Greenwood camp, has been delayed in transit, so matters are at a standstill on this property so far as underground work is concerned. It is stated that the Gold Drop, which lies close to the Snowshoe, will shortly be acquired and developed by an incorporated company.

The Winnipeg and Golden Crown, both in Wellington camp, are forging ahead right steadily. No particulars of the work below the surface have lately been obtained by the writer; but as both have lately added to their respective steam plants, and their stock—especially the Winnipeg—has been in demand at increasing rates, it is evident that developments are regarded as satisfactory.

Good reports come from the City of Paris, in Central camp, where the ore showing underground is said to be very good indeed. Mr. John Douglas, of Midway, is understood to have sold out all his interests in this camp, including the Mabel, Cornucopia and Ora. There is some talk of the No. 7 resuming work this summer, but nothing definite is yet known about this.

In Long Lake camp, the Jewel is being developed, but no information is being given out respecting the condition or prospects of the property. Several other claims in the vicinity are also having attention. There are a few men either prospecting or doing assessment work in Kimberly camp. The greater number of prospectors appear to have this year gone farther afield, most to the West Fork and other tributaries of the main Kettle River, and a few to the Similkameen country.

Summit camp has been unintentionally omitted from the above summary, but there is not much known to the writer about it just now. Reports are in effect that the B. C., widely and favourably known as a big copper-gold proposition, is developing most satisfactorily; that the R. Bell looks promising, and that the Oro Denero when its plant, now on the ground, is installed, will "astonish the natives."

Midway, B.C.

PERCY VERENS.

ROSSLAND.

(From Our Own Correspondent.)

Unquestionably one of the marked advances for which the mineral industry in Trail Creek mining division is noted, took place last week. Simultaneously with the arrival of the Canadian Pacific Railway the first train on its standard gauge are the coeval facts of ore shipments over the new tram from the War Eagle's new hoist, and shipments from the Center Star's new shaft to its group of six bunkers on the mine's extension of the Canadian Pacific Railway, for the main line proper may be said to terminate at the company's new depot situated on Second avenue, the building being almost completed.

This company, which has been fiercely and systematically attacked in the editorial columns of the *Miner*, appears to have survived the silly attacks made on it by that journal, and the company is pursuing the even tenor of its way very much to the disappointment of the eminent nobodies who have been vainly endeavouring to saw the air. It has been said that the milk in the coconut is accounted for by the fact that the wheels have got into the mire, and Hercules has been invoked, but he refuses to be blackmailed. I have never been able to account for the malignity which some people profess to entertain against the Canadian Pacific Railway Company. This hostility is certainly unworthy of a community less pretentious, and less ambitious than what I find here. It is doubtless, to put it mildly, an error of judgment, and decidedly a wrong policy. So far as my investigations are concerned, there is nothing to justify this malignant prejudice. Prejudice has never yet built up a healthy community, and it never will build one up. It would be ungenerous and unjust to charge our American neighbours with having originated this hostility. It has not been the aliens at all, but some of the "ward" politicians clothed with a little brief authority. This seemingly unfounded prejudice must disappear in the light of the great work this railway company

is doing for southern British Columbia, and the sooner the better, for the sooner capitalists learn that here there are no tricksters in ambush to waylay capital and abuse it, the better. "There are others," and other fields. Whatever is necessary to safeguard public interests will certainly be done. This precludes the necessity for "demagogical interference."

The centre of the greatest industrial activity is now located on the southeast face of Red Mountain. Down the long War Eagle tram for a distance of 1,200 feet the ore is conveyed by means of a modern tramcar and emptied into the bunkers, from which it is loaded into box cars of 20 tons capacity each. At the same time the group of six bunkers is being fitted from the new shaft of the Center Star via its own tram, which runs for about 250 feet from the Center Star shaft to the ore bunkers.

Both bunkers are situated on the mine's extension of the Canadian Pacific Railway. A siding runs in front of the Center Star bunkers, but at present this siding is not used. The cars loaded with Center Star ore are loaded while on the main line of the extension by means of an extra shoot connected with the gates of the bunkers, but the siding will eventually be used. A few hundred yards further to the west on Le Roi ground, the tram cars are steadily delivering ore to the 32-ton cars of the Great Northern, which ore is sent to the Northport smelter, while that conveyed to the Trail smelter is shipped on Canadian Pacific Railway cars, and this ore comes from the Center Star and War Eagle mines. The Iron Mask shipped ore to Northport.

As ore shipments from Rossland mines have recently been the subject of adverse criticisms from the Coast press, it would be well for the readers of the RECORD to understand that I have not found the Rossland *Miner* to be a reliable authority on ore shipments or other statistics in connection with the mineral industry here. Some time ago it was compelled at the close of 1898 shipments to reduce its total of ore shipments from 126,000 to about 116,000 tons.

It was in error to the tune of about 10,000 tons, and it published this error from November until the close of that year. On January 1 it was compelled to reduce its total by 10,000 tons. The mistake was really a typographical error, which occurred in transferring from one week to another. This statement can be confirmed by referring to its files.

Ore from the Le Roi has heretofore been shipped in cars marked 60,000 pounds capacity, but since this capacity was placed on the cars the siding and ends have been raised 18 inches, giving, I am informed, a capacity for each car of 32 tons. These cars are open trucks.

At present the ones in use on the Canadian Pacific Railway are box cars with a capacity of 40,000 pounds, or 20 tons to the car. According to the *Miner's* record of shipments there have been shipped this year up to June 17, 58,756 tons of ore, or about 930 tons in excess of the real figures. The Le Roi is credited with 38,003, it should be 37,413, and the War Eagle with 18,554, which should be 18,270. Iron Mask 1,200, when it should be 1,178. Center Star 945, when it should be 924, and 44 for Deer Park and Evening Star, when it should be 41—making a total of 57,826.

The spirit of exaggeration which accompanies Western progress, is indeed very noticeable. As the local statistician really believes that it is his duty to help the industry along even with untruths, he is more firmly convinced that because it is popular it must be right. He believes that there is nothing true and nothing new, and that nothing matters very little.

To appreciate the growth of this mining industry here, one may station himself at a convenient point, say at the end of the wagon bridge opposite the Center Star Hotel, where an extensive view of the various active mines can be attained. Looking up the gulch are the old workings of the Center Star and the present shafthouse office, etc., of the Iron Mask. To the left of these on the southeast face of Red Mountain are the cluster of buildings, shafthouse and other structures of the Center Star Gold Mining Co. In the centre are the buildings and workings of the War Eagle, and from the bunkers on the railway track to the great hoist, from Patsey Clark's old log cabin to the modern hotel of the New War Eagle, all denote progress. To the extreme left are the cluster of Le Roi buildings with its separate system. To see all of these in the daytime is indeed to witness much industrial activity, but the picture must be seen at night illuminated with its hundred electric lights, sparkling like huge diamonds in the blackness behind. The lights with their twinklings seem to add to the activity, and the whole panorama is one of restlessness, denoting that an army of industrial workers is beneath the surface, hundreds of feet in great shafts, in long and bewildering tunnels in grimy cross-cuts and drifts, working as sappers and miners to get ore enough out to meet the expectant demands for dividend. Shift replaces shift, hour follows hour, the

harsh grating of the ore as it is dumped into cars and bunkers continues night long. At midnight a number of grimy-faced men with candles attached to their miner's dips trudge to their lowly cabins, and are replaced by others who, in their turn are relieved by others, and so on *ad infinitum*.

In the deep and middle of the night, as well as in the broad sunlight of day this "vein pursuit of gold" goes on, but there is little day once the surface is entered. It is all darkness, pinned here and there by miner's dips, and resounding with the noise of drill and blast, one constant recurrence of sameness from which the visitor emerges with some inward feeling of thankfulness that he is not a miner, and has no grudge for the poor devils who have to spend so much of their lives under ground, and yet there is no lack of numbers of men seeking this hard work. They keep coming from the far off land of the blue-nose, from across the ocean, from south, east, west and north, and are fully verifying the economic question that the supply is greater than the demand.

The strike which recently occurred in the Slocan, Ymir and other mining divisions has not yet affected Rossland. Whatever may be the fixed policy of the future here, at present the feeling seems to be one of reluctance to disturb the *status quo*. The mine managers evidently prefer to have no disagreement at present at least, and since there is no strike, it may be taken for granted that the demands of the miners are being complied with, otherwise the union would certainly place itself on record.

Subjoined is a brief report from the various working properties: Le Roi, average shipments, 9 cars daily, 32 tons each, 288 tons; War Eagle, 8 cars daily, 20 tons each, 160 tons; Center Star, 3 cars daily, 20 tons each, 60 tons; Iron Mask, 1 car daily, 20 tons.

The shipments made by the Evening Star and the Deer Park have not been constant or of a commercial character as may be inferred from the quantity.

Iron Horse.—The shaft is 300 feet deep. Work continues in the north and southeast drifts at the 300 foot levels. A quantity of low grade ore has been encountered. The southeast drift is being continued in the direction of the old workings where the surface showing is the best of any on the claim. The fact that the management is drifting towards these workings is criticised, and why they were abandoned, now that they are being drifted towards, has not been explained by the present management.

Mascot.—The management is cross-cutting from one tunnel to another.

Sunset No. 2.—Shaft No. 1 is down 460 feet. No. 3 is down 70 feet. About 25 men are employed on the property.

East Le Roi (Old Nickel Plate).—Work was commenced on the new hoist, which is about 400 feet northwest of the old workings. It is the intention to connect this shaft with the old workings at the 200-foot level. No shipping ore has yet been found.

East Le Roi—Great Western.—Operations on the property continue to be suspended.

Deer Park.—Drifting north and south continues without material results.

White Bear.—The management is placing skids in the shaft down to the 250-foot level. Drifting is about to commence.

Iron Mask.—Work has commenced on the projected improvements.

Burnt Basin.—This district lies 8 miles west of Long Lake, and about 18 miles west of Rossland. It is in the extreme eastern portion of the Kootenay River, about 13 miles north of the International Boundary. The Columbia and Western extension of the Canadian Pacific Railway runs directly through the district. It is expected that the passenger service will be in operation by the 1st of July. The district was first explored four years ago by A. P. Hunter and J. W. Henderson, who made the first location. Very little interest has been taken in this division until the present year. There are at present several strong joint stock companies operating in this section: The Mother Lode, the Avon Gold Mining Co., and the St. George Mines Development Company, of Toronto. A number of properties are being developed. The country rock consists principally of a gold bearing quartz. There are a number of ledges which are remarkable for their size. This section is becoming better known every day.

Mother Lode Mines, Limited.—This company is operating the Ajax and Daly mineral claims.

Burnt Basin.—The capital stock is \$100,000, divided into 1,000,000 shares at the par value of 10 cents per share. Considerable surface work has been done on these claims, disclosing some strong leads. The contact is composed of quartz and pophyry, and assays as high as 17.19 ounces to the ton. The average assays give 3.26 ounces of gold and 2.32 ounces of silver. Wood and water are plentiful on these claims. A brick house and dwelling house for the superintendent have

recently been erected. A shaft has been sunk on the main lead. R. H. H. Alexander is superintendent. The property has been experted and formally reported on. There are ample funds in the treasury for development work. The property is about to be crown granted. The shares of this company are selling at par.

White Bear Consolidated Mining Co.—Operations have resumed in this mine. Sinking has begun at the 200-foot level, and will be continued until the 400-foot level is reached. Mr. J. J. Warren, of Toronto, and Mr. John Y. Cole, of Rossland, who are promoters of the White Bear mine, recently purchased some mining property on the Pend O'Reille about 15 miles from Waneta. The character of the mineral is free milling, and it is the intention of the owners to install a 10-stamp mill. The property is being developed by a tunnel which will run in 350 feet. The lead is 5 feet wide, and averages about \$10 to the ton. Mr. Warren has gone east to purchase the necessary plant for running the mine, which has been named the Bunker Hill.

CARIBOO CREEK.

(From a Correspondent.)

The town of Burton is situated on the east bank of the Columbia, forty miles north of Brooklyn and twenty-five south of Nakusp. The site has a splendid situation and commands four large creeks, all of which enter the Columbia via Cariboo creek at Burton, these being Goat Canyon, Snow, Trout and Cariboo creeks. Here we have very well defined ledges, and old timers say that the neighbourhood is remarkable for the quantity of float to be found.

On Cariboo creek the Milly Mac group of claims has been worked by Mr. C. C. Woodhouse, of Rossland, and now controlled by the B. A. C., through Mr. Mackintosh and Gen. Warren, and the fact that this big corporation has become interested in the camp may be regarded as a promising sign.

Messrs. P. Burns and W. Mackenzie own the promising Chieftain group, the ore of which has assayed as high as 8,000 ozs. per ton, though smelter returns gave but \$338.00 per ton for the first shipment made.

The Golden Hope group, managed by Messrs. Finch & McMillan, in which the Hon. G. E. Foster is interested, as also in the Silver Queen properties on Snow creek, are mines—for they can now be described as such—in which great faith is placed by the management, as is evidenced by the expenditure of \$30,000 for machinery and equipment.

The Con. Cariboo Co., of Vancouver, own a very promising property that compares well with any property for the amount of development performed thereon. Then the Silver Beaze on Upper Cariboo creek has a magnificent showing right from the grass roots and the owner will receive a handsome sum for the claim when the pending sale, negotiated by Mr. R. S. Burton to a Glasgow company, is consummated, the price being \$40,000.

Excellent rawhide trails to all the mines and waggon roads up both Snow and Cariboo creeks enable owners of properties to escape excessive charges for transportation. Meanwhile a good season is expected, and judging by the many prospectors now arriving, it means that Cariboo creek is attracting both capital and the trail blazer.

NELSON.

(From Our Own Correspondent.)

This has not been a particularly lively month at Nelson, three properties, the Athabasca, Granite and Royal Canadian being compelled to close down in consequence of the eight-hour law difficulty. Development work is proceeding steadily, however, at the Fern and one or two other mines. At the Fern a new compressor has been installed, and is now working in a satisfactory manner. Excavations for the new stamp mill to be erected on the Granite have been commenced, and lumber for the flume, through which water will be supplied for motion power has been delivered on the ground. Arrangements, it is understood, have been made for the resumption of work on the Nelson Poorman, and following the plan already set by the Hall Mines Co., and about to be adopted at the Athabasca mine, will be carried on upon the contract system chiefly. The Hall Mines are now making regular shipments of lead-silver bullion to the Balbach Works at Newark, New Jersey.

SLOCAN.

(From Our Own Correspondent.)

The anticipated deadlock between the representatives of capital and labour—a result of the sadly misdirected efforts of the Local Legislature in the way of reform—has materialised, and as a consequence we are now depending on a few insignificant prospects to uphold the reputation of Canada's richest silver belt. To speak of the loss which has already been occasioned

to the mining industry and the Slocan is indeed a painful matter; but when we contemplate the enormous damage which will inevitably be inflicted unless a speedy settlement is come to, words fail to express our consternation.

At present the whole of the producing mines are lying absolutely idle, so far as underground work is concerned; and, more than that, the miners have practically all left for other parts. It should be remembered that the burden of the strike falls heavier, in many instances, on the business people of the community than on those more nearly affected, as they are frequently in a position from which it is impossible to recede without incurring a heavy loss.

No overtures appear to have been made from either party having in view a termination of the existing state of affairs, and it is almost impossible to conjecture when a satisfactory agreement will be arrived at. The union apparently has no desire to compromise, for when the Slocan Star offered \$3.25 per shift of eight hours it was peremptorily declined, and the men called upon to cease work.

Notwithstanding the enormous mineral wealth of the Slocan, the idea of prospecting appears to have gone quite out of date. It was commonly imagined that a large number of the miners would stay in the country until matters were settled, employing their time to advantage in the interval by prospecting and developing their claims. Judging by what has since taken place this was merely a popular fallacy, for either the majority of them were not claim-holders, or else they lacked the necessary confidence in the future of the district to stimulate them in their search. It is quite inconceivable that the vast tract of mineral territory which is readily accessible from lake points does not induce more people to tempt their fortune in the mountains. The fact of the matter is, an indescribable charm and attraction appears to exist about everything new, whether it refers to an article or a locality, and the out-of-the-way places, where nothing of value has ever yet been discovered, seem to exert an influence which is not felt in more settled regions. It is true that the larger part of the ground in the Slocan is already staked; but where are the owners, and what are they doing? They surely don't expect prospects to develop into mines of their own accord; but discussion on this point is much belated and unprofitable at this stage, so we must perforce leave the matter where so many others have left it—without a satisfactory solution.

As was only to be expected under the circumstances, ore movements have been restricted, and will cease entirely ere long. The Payne and Slocan Star were the only shippers last week, totalling 210 tons between them, but even this consisted of ore mined previous to the strike.

The work in connection with the concentrating plant at the Ruth is being speedily pushed to completion, and at the Wakefield on Four Mile it is probable that an aerial tramway will soon be in operation, surveys and preliminary estimates having already been prepared. The new and commodious bunk house to be erected at the Payne, admittedly the finest in the Slocan, is now under construction, and will greatly increase the comfort of the men when work is resumed. A long dormant property, the Enterprise on Ten-Mile, has recently taken a new lease of life. Since its purchase by the London & British Columbia Gold Fields the surplus ore lying around the wharf to the tune of 460 tons, has been gathered up and sent to the smelter, and preparations are now being made on a scale which looks like business. In view of the eminently successful flotation in London the other day, there is hardly room for disappointment this time.

The difficulty arising over a misunderstanding with regard to the new law requiring all miners' licenses to expire on the one date, caused considerable annoyance and loss of temper as well as money at the government office here. Those who declined to take out a fresh license until their old one was rendered non-effective are now congratulating themselves on their astuteness.

The appropriation for roads and trails in the Slocan is ludicrously inadequate as usual, in spite of the fact that we returned a government member in place of an opposition one as formerly, but then I suppose it is the best we can get, so what's the use of complaining.

Our hopes and aspirations have been given a rude set-back by the present labour difficulties. The chances for a busy and prosperous season were originally of the brightest; the mines were one and all looking well, and as a natural consequence outside improvements were everywhere being rapidly proceeded with. The number of important deals on the tapis were literally too numerous to mention, but almost all have been checked, and the prospects of many permanently ruined by the unfortunate turn affairs have taken; yet despite the fall in the price of silver, the increased duty on lead, the obnoxious mineral tax, the Klondike boom, the counter at-

tractions at Rossland and Boundary, where only the fashionable metals are met with, and now most cruel cut of all, the eight-hour law, who would not remain a proud though indigent citizen of the silvery Slocan?

NORTH EAST KOOTENAY.

(From Our Own Correspondent).

The opening of spring and the boom in copper have brought brighter prospects to this district than have been experienced for some years. Outfitting for the reported gold strike at Tete Jaune Cache has been going on actively at Golden, and the beginning of the month saw some fifty men and a hundred packhorses leaving Golden for Tete Jaune Cache. One fatality is reported en route on the Columbia River, a prospector named Machet having been drowned by the upsetting of his boat in the rapids north of Kinbasket Lake.

On Porcupine Creek, above Beaver, the British Columbia Alliance have bonded a promising group of gold-copper claims, and are waiting for the snow to go to start work. The company have also had prospectors at work under the direction of Mr. Graves, M. E., locating the old bed of the stream, which contains good placer prospects, and success has so far attended these efforts that four claims have been recorded there with a view to introducing a hydraulic plant.

The French Creek Company, who recently took up some ground at Surprise Rapids, on the Columbia River, about forty miles north of Golden, have announced their intention of prosecuting active prospecting work on their property this season.

The holders of the bond on the Bluewater claims also intend to carry on development work, and are now making arrangements to that end.

The Certainty Company, which has been organised in Quebec, with a capital of \$1,500,000, have taken over two promising copper properties within ten miles of Golden, namely, the Certainty Group on Fifteen-Mile Creek, and the Porphyry and Iron Hill group on Canyon Creek, and instructions have been sent to Mr. E. A. Hagen, on whose reports these properties were acquired, to put in hand development work forthwith, ample funds having been provided for the purpose of fully proving up these properties.

Mr. H. Croft, of Victoria, has also announced his intention of pushing on development on the properties which he recently acquired at Spillimachene on behalf of the company which he represents. On the Burns Basin extensive development operations have been commenced on the Lucky Jack group.

Mr. W. G. Mitchell-Innes, manager of the Golden British Columbia Company, is developing a property on McKay's Gulch on Toby Creek, in the Windermere district, on which an extensive strike of copper ore has been made; and work is to be resumed with the disappearance of snow on the Pretty Girl on Horsethief Creek, and the company's engineer will shortly arrive from England to fully advise as to future operations on these properties.

The Swansea has about 500 tons of ore on the dump, and the north shaft is looking well, a fine body of grey copper ore having been opened up. The lead on this property is 20 feet in width, and is mineralised throughout. The Derby Company, of Rossland, are the new owners of this promising mine.

Development work is being pushed on at the Dolphine on Toby Creek. This high grade silver-lead proposition is probably the best developed mine in the Windermere district to-day.

Mr. Farrell, a mining engineer from San Francisco, has arrived to put in hand development work on the Red Line group on Horsethief Creek, but is delayed on account of the late spring and the quantity of snow still remaining at the higher altitudes.

PUBLICATIONS.

MANUAL of Assaying—Gold, Silver, Lead and Copper—by Walter Lee Brown (Eighth Edition), E. H. Sargent & Co., Chicago, Ill.

All who are interested in assaying will welcome a new edition of this Standard Manual.

The first edition was published in 1883, and since that time there has been a steady demand for the book. Seven editions have been sold, which may be taken as a fair index of the estimate placed upon the book by assayers and students of assaying. This Manual is especially intended as a guide to those without previous technical or scientific training.

At the same time it contains standard methods in use by assayers the world over, and nothing of importance has been omitted.

Very complete information is given with regard to the apparatus used in assaying, reagents, methods of testing reagents

to ascertain their purity, gold and silver ores, copper ores, lead ores.

There are also special methods of assaying various minerals, amalgamation assay and pan test for gold.

The chlorination assay and the assay of gold and silver bullion are thoroughly explained, as well as the determination of specific gravity of minerals.

To make the book more complete a list is added of the principal gold, silver and copper minerals found in the United States. There is also appended a list of standard books on subjects more or less connected with assaying, and some useful tables. Altogether this little volume forms one of the most satisfactory hand books available for assayers and students of assaying.

Chemical and Metallurgical Hand Book—Tables, Formulas and other information—by Cremer & Bicknell, Cleveland, Ohio.

Persons engaged in technical work are constantly required to make calculations relating to matters connected with the practice of their profession. The data for such calculations are not always available, and the particular mission of the volume before us is to furnish in concise form a great deal of information relating to such points. Much care appears to have been exercised in the preparation of the various tables contained in this book, and every effort has been made to secure accuracy in every detail. Among the most useful tables in the volume are those showing molecular weight, specific gravity, melting point, boiling point and solubility of the principal organic compounds.

Other useful tables to the chemist are those giving the percentage of each element entering into the composition of a large number of inorganic substances.

There are also alcohol tables, giving percentage by measure and weight of solutions containing alcohol.

The determination of percentage, composition of acids and alkalis by specific gravity is given, as well as tables for converting degrees of temperature from Fahrenheit into Centigrade.

A valuable feature of the book is a glossary—of technical words and phrases—with their equivalents in French and German.

Altogether this work forms a most useful hand book for chemists and others who are more or less connected with metallurgical operations. The binding and printing is remarkably good.

CORRESPONDENCE.

The Editor does not hold himself responsible for the opinions which may be expressed in this column. No notice will be taken of communications unless accompanied by the full name and address of the writer.

THE SPOKANE INDUSTRIAL EXPOSITION.

IN THE EDITOR:—The annual Spokane Fruit Fair has been merged into an event of broader scope than heretofore, and this, its sixth year, is to be known as the Spokane Industrial Exposition, with mining as its most prominent feature. Extensive exhibits are expected from all the camps of this State and those sections of British Columbia, Idaho, Montana and Oregon heretofore represented, with the addition of all other camps available.

Additional features are to be added in the exposition of mining machinery, and awards will be made on the merits of the exhibits, upon the recommendation of a competent jury.

A special excursion of mining investors from Eastern cities is to be undertaken. From the present outlook it is expected that such excursion will be made and that several hundred Eastern people will participate.

The American Institute of Mining Engineers will hold their annual convention in San Francisco in October and negotiations are already started to induce those from the East to return via Spokane, where they can stop over for a few days, and, after examining the exhibits in the Exposition, visit some of the outlying camps. This organization is composed of the leading mining men and engineers of this country, and will probably number three hundred in attendance.

Parties have been selected in nearly all the mining camps, who are urged to see that creditable exhibits are made from their sections.

Every effort will be bent to make this the greatest mineral exhibition ever shown in this country; it only remains for

those who are chosen to represent the camps to make it such. Ample time is provided in which to do the work, and the opportunity is one which should not be overlooked.

In addition to the usual collection of mineral, it is hoped to have special collections, private cabinets, and manufactured products as well.

Great pains should also be taken to have the fullest information at hand so that intending buyers may have additional data on which to form an opinion of the property which the exhibit represents.

If any camps have been omitted it is an oversight which the committee desires to have corrected, and they respectfully urge that they be notified of the error promptly, to the end that it may be remedied.

Exhibits must positively be installed before the opening of the Exposition, and ample time is therefore provided for the collection of the exhibits and the preparation of data thereon.

Freight rates and instructions for shipping will be announced later.

L. K. ARMSTRONG,
Secretary Mineral Division Spokane Industrial Exposition,
Spokane, Wash.

THE EIGHT-HOUR QUESTION.

TO THE EDITOR:—The people in these progressive times must be prepared to give up many pet prejudices. It does not always follow that that to which we have become accustomed is necessarily right because it has prevailed.

This is a very progressive age, and we frequently see some of the stoutest opponents of a proposed measure finally giving way, though sometimes reluctantly to the overwhelming testimony which enforces belief. This is particularly emphasised in labour problems, and if we read the signs of the times aright we cannot help seeing that boards of arbitration and boards of conciliation in questions arising out of labour and capital may be satisfactorily adjusted by such tribunals. The only difficulty that presents itself is how shall these boards be constituted.

Meanwhile, the latest phase of the labour situation in the interior is that the mine owners and the union are arriving at a better understanding as to their mutual obligations. It is clear that the mine owners prefer to make concessions, rather than see the lock-out continue indefinitely. One of the most agreeable incidents connected with the strike in the Slocan is recorded by the Slocan Star. The men had struck in accordance with the demands of the union, when it was found that there were some dangerous places in the mine which needed immediate attention. Acting under instructions of the union a small force of union men, presumably at the old rate of wages went to work and made the mine safe, though there was at the time supposed to be a lock-out. This regard for the safety of an old friend that has paid out hundreds of thousands of dollars to miners is like a silver lining to the cloud which has been hanging over this industry. It shows that beyond the question of a certain wage rate there are no animosities. The episode speaks well for the union, and hence there should be an easy way out of the present difficulties where there is otherwise so friendly a feeling as this incident testifies.

Rossland, B. C.

H. F. E.

PRODUCING MINES.

ROSSLAND.

During the month of May, 8,670 tons of ore valued at \$241,560 were exported from Rossland.

Our Rossland correspondent telegraphs: The total ore shipments of the Rossland mines for the year ending June 30th, amount to 64,000 tons, to which June contributed 13,800 tons. Though railway facilities are now complete, owing to recent accidents and other causes, ore shipments have not reached the volume predicted, but next month's weekly output will be increased commensurate with additional facilities. One important feature worthy of note in connection with the output is that the Centre Star mine is gradually taking leading place among shippers.

The Le Roi returns from March 1st to May 15th—75 days—show 23,420 net tons shipped, yielding 14,400 ounces gold, 26,000 ounces silver, 888,000 pounds of copper, total value \$412,000; average production per day 312 tons, worth \$5,500.

CARIBOO.

A consignment of gold dust from the Horsefly Gold Mining Co.'s property, of the approximate value of \$10,000, was sent down to Ashcroft this month.

NELSON.

We are indebted to the general manager of the Hall Mines Ltd., for the following results of the Company's smelting operations for four weeks ending June 2nd, 1899: There were 1,792 tons of Silver King and 1,173 tons of custom ores smelted, yielding (approximately) 26 tons of copper, containing 26,930 ozs silver, 278 tons of lead bullion, containing 366 tons of lead, 75,870 ozs. silver, 578 ozs. of gold.

The following are the mine exports passing through the port of Nelson for the month of May:

	Value.
Coke, 270 tons.....	\$ 1,314
Lead bullion.....	87,669
Copper bullion.....	33,782
Gold bullion.....	20,860
Total.....	\$143,625

The returns from the Athabasca mine at Nelson are as follows:

Tons crushed.....	404
Value of bullion recovered.....	\$ 8,938.13
Gross value of concentrates.....	2,131.11

Total value recovered.....	\$11,069.24
Value per ton in bullion.....	\$ 22.12
Value per ton in concentrates.....	5 27

Total value per ton.....	\$ 27.39
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THE SLOCAN, MAY.

The following returns of exports are made from Kaslo for May:

Gross pounds ore exported.....	3,901,630
Pounds lead.....	1,734,053
Ounces silver.....	196,755
Value.....	\$ 169,087

From the subport of Nakusp the following is reported:

Gross pounds ore.....	302,930
Pounds lead, contents.....	98,891
Ounces silver.....	15,229
Value.....	\$ 13,293

SLOCAN, JUNE.

The production of the Sandon mines to the 23rd of June is as follows:

	Tons.
Payne.....	140
Slocan Star.....	380
Last Chance.....	65
Total.....	585

WHITEWATER TO JUNE 23RD.

Whitewater mine.....	197½
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The production of the Slocan Lake mines to the 24th June aggregates 2,083 tons, and the total production from the Slocan, 15,058 tons.

COAL SHIPMENTS.

TOTAL FOREIGN SHIPMENTS FOR MAY.

	Tons.
The New Vancouver Coal Co.....	47,021
Wellington.....	26,024
Union.....	4,119
Total.....	77,163

JUNE SHIPMENTS.

The New Vancouver Coal Mining & Land Co., Limited, shipments are:

Date.	Vessel.	Destination.	Tons.
1—	SS. San Mateo	Port Los Angeles	4,298
8—	SS. Siam	San Francisco	4,378
9—	SS. Amur	Alaska	145
13—	SS. Titania	San Francisco	5,119
14—	SS. Mineola	Port Los Angeles	3,460
19—	SS. San Mateo	San Francisco	4,451
Total.....			21,851

The production of coal from the Fernie collieries for the month was 10,000 tons. The East Kootenay monthly output is steadily increasing, and it is expected that when the new coke ovens are completed the production will reach 700 tons a day.

THE METAL MARKET—JUNE.

[Compiled from special telegraphic quotations to the B.C. MINING RECORD from the *Engineering & Mining Journal*, New York.]

The market has shown evidence of depression this month, and prices have somewhat declined. The closing down of the Colorado smelters, as a result of the enforcement of the eight-hour law in that State may have the effect, however, provided the struggle between capital and labour is sustained for any length of time, of stiffening the price of both silver and lead.

SILVER.

Silver has been very dull this month, though there has been little fluctuation in prices, which have ranged between 60¼ and 60%.

LEAD.

The labour troubles in Colorado will necessarily interfere with production, and as consumers are not well supplied an active market seems probable. The New York price during the month remained stationary at 4.42½, and our telegraphic report to-day (June 27th), shows that no change has taken place. Slowly rising prices are reported from St. Louis, the latest sales being on a basis of \$4.32½ to \$4.35. The average price of lead last month was \$4.44.

SPELTER.

Decidedly lower prices have prevailed this month, our latest quotations being \$5.95 and \$5.85. The average price last month was \$6.88.

COPPER.

The copper market continues quiet, and buyers do not appear anxious to purchase ahead at the prices now ruling. Again no pressure to sell is observable, and few transactions are reported. Lake copper has fallen slightly from 18 to 17%, the present price. Electrolytic remains from at 16%, 15% for cathodes, while casting copper is quite nominal at 16¼ to 16%.

COAST MINES.

The output of the Dorothea Morton Mine for the month ending 31st May, was: Bullion, 2,537 ozs.; assay value, \$13,130; and made up as follows:

	Value.
590 ozs. fine gold value (gold).....	\$12,199
1,526 " (silver).....	931
The mill ran 20 days, 5 hours and 48 minutes.	
Tons crushed.....	1,395
Tons per stamp per day.....	6.8
Tons treated by cyanide.....	1,435

Calculated extraction 89.3 gold and 80 per cent. silver.

The returns published each month have the assay value of bullion, but the actual value as per smelter returns are as follows, commencing from the first return:

December.....	\$ 3,363
January.....	6,231
February.....	8,120
March.....	7,864
April.....	9,536
May (assay value).....	12,130

THE STOCK MARKET.

THE closing down of many of the Slocan mines, in consequence of the eight-hour law, has had a most depressing influence on the market, and all dealing in Slocan stocks has practically ceased. At the end of May Payne was selling at \$3.00, but since the mine closed down the stock has changed hands as low as \$3.10. As, however, it is proposed to pay dividends out of the surplus on hand until such time as operations are resumed, the stock has rallied to \$3.45 asked and \$3.39 bid in Montreal. Since our last report Dardanelles has fallen from 15 to 13, Noble Five from 30 to 26 asked and only 22 bid, Rambler-Cariboo has declined from 36 to 31, and Wonderful to 6 asked and 4 bid.

In the Nelso District Athabasca has held its own at 40 to 42, whilst Dundee has fallen to 24, and Nelson Poorman from 25 to 16, though quoted to-day (June 29th) at 20, Fern has fallen from 50 to 35.

In the Trail Creek District Big Three has declined from 27 to 20, Deer Park from 6 to 4, Iron Horse from 16 to 14, Iron Colt from 13 to 12, Jumbo from 40 to 25, Monte Cristo

from 12 to 8½, War Eagle from \$3.80 to \$3.65. Whilst the following have advanced: Iron Mask from 66 to 70, St. Elmo to 8 and Homestake to 6. The best sellers have been Evening Star, Homestake, Iron Mask, St. Elmo, Virginia, White Bear and War Eagle.

Texada Island—Van Anda shares have been very active, and have advanced from 7 to 10 since our last report, and the large shareholders expect these shares to go much higher. The smelter is expected to be in operation by the 15th of July, and before that time all the cheap parcels will be bought up so far as the Coast market is concerned.

Vancouver Island shares have been inactive for some time, but the Alberni Consolidated mill is again running, and if the results prove satisfactory to those who have the option on the mine a sale may be the result.

Cariboo District—The Cariboo Hydraulic is held firm, \$1.45 asked and \$1.40 bid. A clean-up is expected shortly.

Fairview Camp—Fairview Corporation shares have been selling at from 8½ to 9 and Smuggler at 3.

Lillooet District—A few enquiries have been made for Golden Cache shares at from 2 to 3.

Boundary Creek—Shares have been in good demand, principally Winnipeg, at 32 to 33, Rathmullen at 7 to 8, and Morrison at 16 to 17. Knob Hill and Old Ironsides are held very firm in Montreal at 98 and \$1.15 respectively.

Camp McKinney—The Cariboo has fallen from \$1.40 to \$1.25, Waterloo from 11 to 9; Fontenoy is held firm, with only a few small holders offering, at 17½ to 19. Excellent reports come from the Fontenoy, and this is expected to be one of the big mines of Camp McKinney. All Fontenoy shares offering under 17 cents were recently bought up in Victoria, where the stock is principally held. Sailor remains firm at from 15 to 16. This Company has recently bought two more claims, namely, the Rover and the Alice Fraction, adjoining the Cariboo.

THE ROSSLAND STOCK MARKET.

(Special report and quotations by Messrs. Dickson & Orde.)

THE feature, perhaps, of the past month has been the completion of the reorganisation of the St. Elmo Company, whereby the assets of this concern passed into the control of a syndicate in which are supposed to be interested some prominent capitalists of New York, it is reported that the New St. Elmo Gold & Copper Mining Company are prepared to venture, if necessary, on their property from \$75,000 to \$100,000. With reference to other properties in the Rossland district, the Evening Star from all accounts is proving to have some valuable ore bodies; whether this be the case or not we do not know, but in any event the mine is open for the inspection of those who desire to go in. The management, we understand, purpose making some ore shipments to the smelter. Some considerable interest has also been evinced of late in the Home stake of the South Belt in this camp; it is rumored and believed in to some extent that some nice ore has been met, the management are, however, exceedingly reticent and any reliable information about the condition of the property is very difficult to obtain. A small force of men are still at work on the Iron Colt, but it is expected that as soon as Mr. J. F. McRae—now in Montreal—returns, work will be more vigorously prosecuted.

Resumption of work on the Alberta is also contemplated, this property has about fifty-two acres of ground adjoining the Columbia & Kootenay, and has in the neighbourhood of fifteen hundred feet of tunnel work.

In the Boundary Creek district Rathmullen and Winnipeg have been the decided favorites, and in these a large amount of trading has been done.

The shares that have been dealt in to the largest extent on our market during the past month, have been Rathmullen, Winnipeg, Brandon and Golden Crown, Homestake, Okanagan, Tamarac (Pooled), Virginia, Waterloo, Evening Star, St. Elmo and Rambler Cariboo.

Abe Lincoln.....	\$ 9	Athabasca.....	\$ 52
Commander.....	11	Brandon & G'n Cr'n....	31
Deer Park.....	5	Cariboo (C. McKinney)...	1 47
Eureka Consolidated....	10	Cariboo Hydraulic.....	1 45
Gertrude.....	11	Cayoosh Creek Mines...	60
Giant.....	5	Dundee.....	25
Gopher.....	4	Dardanelles.....	13
Grand Prize.....	3	Goodenough.....	11
Iron Colt.....	14	Knob Hill.....	98
Iron Horse.....	17	London Hill.....	15
Jumbo.....	25	Nelson Poorman.....	20
Lily May.....	20	Old Ironsides.....	1 15
Monte Cristo.....	11	Reco.....	80

Mugwump	5	Salmo Consolidated.....	20	Silver Bell.....	5	Tinhorn	6
Novelty	5	Smuggler	3	St. Elmo	8	Two Friends	9
Poorman	13	Slocan Star.....	1 15	Victory Triumph	11	Van Anda.....	10
Rossland Homestake...	5	Sable Creek.....	5	Virginia	23	Victoria Texada.....	10
Rathmullen.....	9	Tamarac (pooled).....	15	War Eagle.....	3 75	Waterloo	11
				White Bear.....	5	Winnipeg.....	34

ERRATA.

In the article which appeared in our last month's issue, under the heading of the Mines of Boundary Creek, the value of the ore in the pay chute of the Last Chance mine is given as assaying \$1.20 per ton. The decimal point was a typographical error, the value of the ore being \$120 per ton.

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The Company's property is situated on Forty-Nine Creek, about 8 miles from the City of Nelson, B.C., and in the well-known free-gold belt, in which are also the Athabasca and Poorman mines, which have yielded excellent profits to their owners. Two shafts 35 feet deep have been sunk on one vein, and numerous cuttings have been made, showing the continuity of the ore body for one thousand feet. Assays from ore from these works are as follows: \$80, \$87, \$246, \$361, \$412. Dr. P. Langhammer, mining engineer, estimates this vein to average \$43 in value and 20 inches in width. This showing has enabled the Company to conclude arrangements for a plant to treat the ore, to be installed before snowfall. The gold being free and capable of extraction on the ground the expensive charges of transportation and smelting are obviated, and the profits will be correspondingly larger than from a base ore of equal assay value. The Company has thus its property proven and arrangements made to mine profitably from its inception and to pay dividends at an early date.

A second quartz vein 6 feet in width, surface ore from which gave assays of \$5, crosses the property. Exploratory work on this vein will be commenced about June 1st. This vein promises to be a valuable one upon development, and arrangements are already made for the enlargement of the reduction plant to keep pace with the output of ore.

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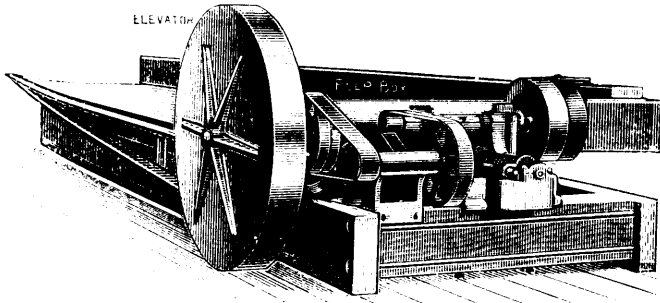
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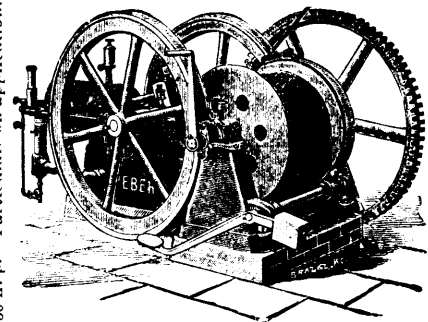
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R. W. GRIGOR, MINES, ROSSLAND, B.C.

Mining Stocks.

Prepared by A. W. More & Co., Mining Brokers, Victoria, B.C., June 26, '99.

Company.	Capital.	Par Value.	Price.
TRAIL CREEK.			
Alberta	\$1,000,000	\$1	\$ 41 1/2
Big Three	3,500,000	1	20
Bruce	1,000,000	1	10
Butte	1,000,000	1	02
Caledonia Con	1,000,000	1	5 1/2
Centre Star	3,300,000	1	
Commander	500,000	1	10
Deer Park	1,000,000	1	04
Enterprise	1,000,000	1	20
Evening Star	1,000,000	1	12 1/2
Georgia	1,000,000	1	05 1/2
Gertrude	500,000	1	11
Golden Drip	500,000	1	15
Gopher	1,000,000	1	03
Hattie Brown	1,000,000	1	03
High Ore	500,000	1	05
Homestake	1,000,000	1	05
Iron Horse	1,000,000	1	14
Iron Mask	500,000	1	70
I.X.L.	1,000,000	5	10
Iron Colt	1,000,000	1	12
Iron Horse	1,500,000	1	14
Jumbo	500,000	1	25
Le Roi	£1,000,000	£5	£9
Lilly May	\$1,000,000	1	\$0 20
Mabel	1,000,000	1	15
Mayflower	1,000,000	1	10
Monita	750,000	1	19
Monte Cristo	2,500,000	1	08 1/2
Nest Egg-Firefly	1,000,000	1	05
Northern Belle	1,000,000	1	4
Novelty	1,000,000	1	05
Palo Alto	500,000	1	14
Poorman	2,000,000	1	5
R. E. Lee	1,000,000	1	3
Red Mountain View	1,000,000	1	11
Rosland, Red Mountain	1,000,000	1	08
St. Elmo	1,000,000	1	6
Silverine	500,000	1	25
Silver Bell Con	500,000	1	4
Victory Triumph	1,000,000	1	08
Virginia	1,000,000	1	20
War Eagle Consolidated	2,000,000	1	3 65
White Bear	2,000,000	1	5
AINSWORTH, NELSON AND SLOCAN.			
American Boy	1,000,000	1	11
Arlington	1,000,000	1	6 1/2
Argo	100,000	0 10	10
Athabasca	1,000,000	1	42
Black Hills	100,000	0 10	10
Buffalo of Slocan	150,000	0 25	—
Channe	250,000	0 25	06
Dundee	1,000,000	1	24
Dardanelles	1,000,000	1	13
Dellie	700,000	1	12
Exchequer	1,000,000	1	12
Fern Gold	200,000	0 25	35
Goodenough	800,000	1	11
Gibson	650,000	1	17 1/2
Hall Mines	£300,000	£1	10
Lerwick	\$1,500,000	\$1	10
Leviathan	2,000,000	1	04
London	150,000	0 25	25
Miller Creek	1,000,000	1	08
Minnesota	1,000,000	1	66
Nelson-Poorman	250,000	0 25	20
Noble Five Con	1,200,000	1	26
Ottawa and Ivanhoe	1,000,000	1	12 1/2
Fayne	3,000,000	1 00	3 45
Rambler Con	1,000,000	1	31
Reco	1,000,000	1	1 00
Slocan-Reciprocity	1,000,000	1	—
Slocan Star	500,000	50	1 25
Santa Marie	1,000,000	\$1	05
Silver Band	250,000	0 25	12 1/2
Slocan Queen	1,000,000	1	10
Star	1,000,000	1	07
St. Keverne	1,000,000	1	04 1/2
Sunshine	500,000	10	—
Tamarac	1,000,000	1	16
Two Friends	240,000	30	06
Washington	1,000,000	1	25
Wonderful	1,000,000	1	06
LARDEAU.			
Lardeau Goldsmith	200,000	1	04
Consolidated Sable Creek Mining Co.	1,500,000	1	10
Lardo-Duncan	1,500,000	1	05
TEXADA ISLAND.			
Gold Bar	100,000	10	10
Raven	1,000,000	1	10
Texada Proprietary	250,000	0 25	25
Texada Kirk Lake	600,000	1	1 00
Treasury Mines	250,000	1	25
Van Anda	5,000,000	1	10
Victoria-Texada	150,000	0 25	04
VANCOUVER ISLAND.			
Alberni Mountain Rose	250,000	1	05 1/2
Consolidated Alberni	500,000	1	5
Mineral Creek	500,000	1	05 1/2
Mineral Hill	750,000	1	05
Quadra	500,000	1	05

CARIBOO.			
Cariboo Gold Fields Ltd	£100,000		
Cariboo Hydraulic Consolidated	\$5,000,000	\$5	1 50
Cariboo M. & D. Co.	300,000	1	25
Golden River Quesnelle	£350,000	£1	1 40
Horsefly Hydraulic	\$200,000		
Horsefly Gold Mining Co	1,000,000	\$10	1 50
Victoria Hydraulic	300,000	1	85
LILLOOET DISTRICT.			
Alpha Bell	500,000	1	
Cayoosh Creek Mines	500,000	1	
Excelsior	500,000	1	
Golden Cache	500,000	1	02
Lillooet Gold Reefs	200,000		25
FAIRVIEW CAMP.			
Smuggler	1,000,000	1	03 1/4
Fairview Corporation	1,000,000	25	09
BOUNDARY CREEK.			
Banner	100,000	10	05
Boundary Creek M. M. Co.	1,500,000	1	05 1/4
Brandon and Golden Crown	1,500,000	1	27
King	1,500,000	1	25
Knob Hill	1,500,000	1	06
Morrison	1,000,000	1	17
Old Ironsides	1,000,000	1	1 13
Pathfinder	1,000,000	1	16
Pay Ore	1,000,000	1	07 1/2
Rathmullen	1,000,000	1	08
Winnipeg	1,000,000	1	34
CAMP MCKINNEY.			
Camp McKinney Development Co.	600,000	1	23
Cariboo	1,250,000	1	1 25
Minnehaha	1,000,000	1	24
Waterloo	100,000	10	09
Fontenoy	1,000,000	1	18
O'Shea	50,000	10	02
Waterloo No. 2	50,000	10	02
Mammoth	50,000	10	02
Little Cariboo	100,000	10	02
Shannon	50,000	5	03
Sallor	1,250,000	1	15
REVELSTOCKE.			
Carnes Creek Consolidated	1,000,000	1	—
VERNON DIVISION.			
Hidden Treasure	100,000	10	10 00
CROW'S NEST PASS.			
Crow's Nest Pass Coal Co.	2,000,000	25	37

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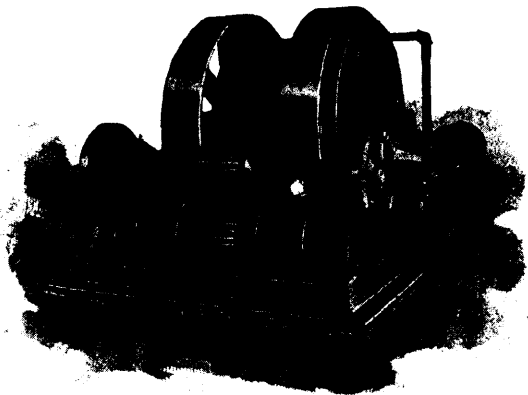
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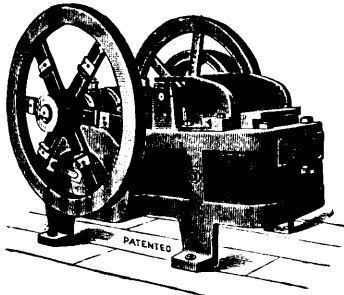
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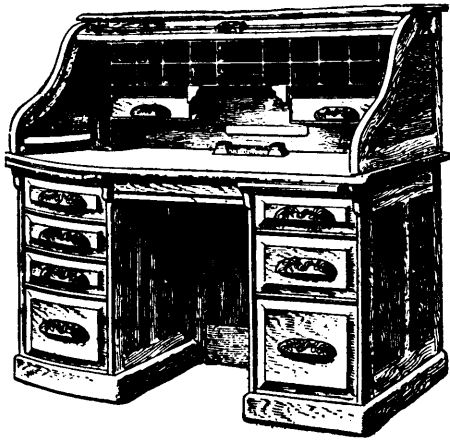
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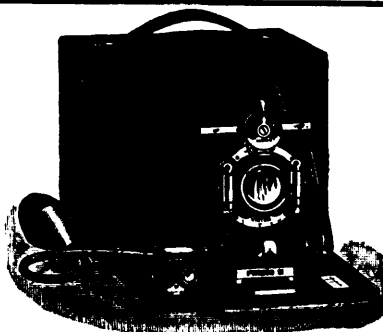
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(Taking effect September 1st, 1898.)

VANCOUVER ROUTE.

Victoria to Vancouver daily except Monday at 1 o'clock.
Vancouver to Victoria daily except Monday at 13 o'clock or on arrival C.P.R. Railway No. 1 Train.

NEW WESTMINSTER ROUTE.

Leave Victoria—For New Westminster, Ladner and Lulu Island Sunday at 23 o'clock; Wednesday and Friday at 7 o'clock. Sunday's steamer to New Westminster connects with C.P.R. Train No. 2 going east, Monday.

For Plumper Pass—Wednesdays and Fridays at 7 o'clock.
For Moresby and Pender Islands—Friday at 7 o'clock.
Leave New Westminster—For Victoria Monday at 13.15 o'clock. Thursday and Saturday at 7 o'clock.
For Plumper at 7 o'clock.
For Plumper and Moresby Islands—Thursday at 7 o'clock.

FRASER RIVER ROUTE.

Steamer leaves New Westminster for Chilliwack and way landings every Tuesday, Thursday and Saturday at 8 o'clock during river navigation.

NORTHERN ROUTE.

Steamship of this Company leave Victoria for Fort Simpson via Vancouver and intermediate ports on the 10th, 20th and 30th of each month, and for Queen Charlotte Islands on the 10th of each month.

KLONDIKE ROUTE.

Steamers of this Company leave weekly for Wrangel, Inuvik, Skagway and Dyea.

BARCLAY SOUND ROUTE.

Steamer "Willapa" leaves Victoria for Alberni and Sound ports the 1st, 7th, 14th and 20th. Extending latter trip to Quatsino and Cape Scott.

The Company reserve the right of changing this Time Table at any time without notification.

G. A. CARLETON,
General Agent.

JOHN IRVING,
Manager.