

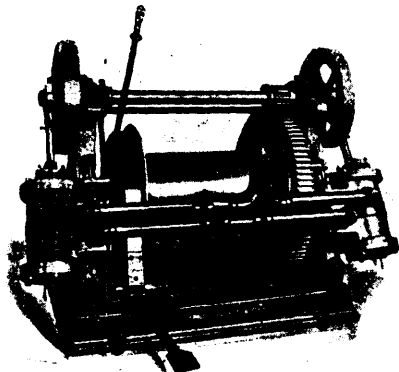
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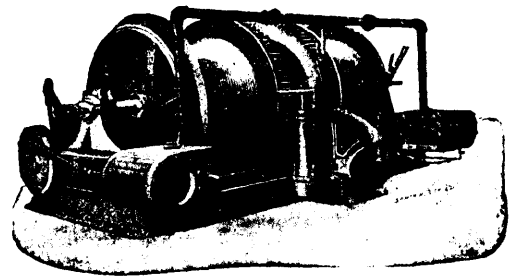
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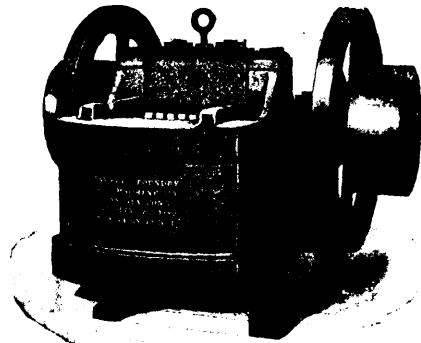
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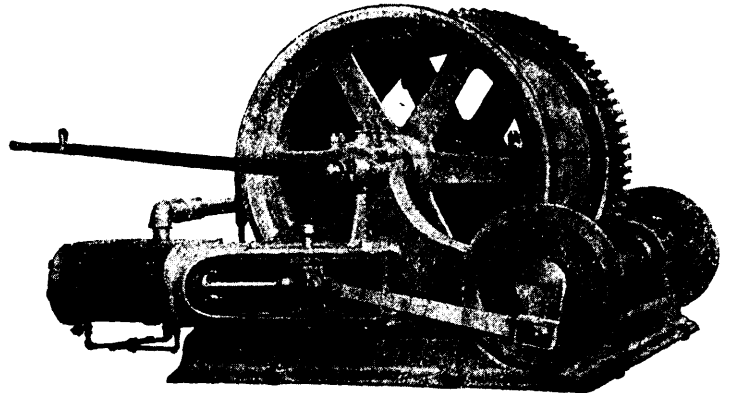
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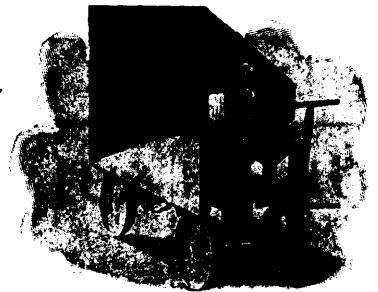
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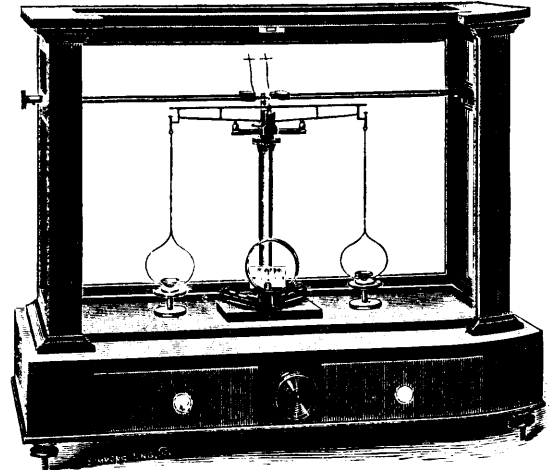


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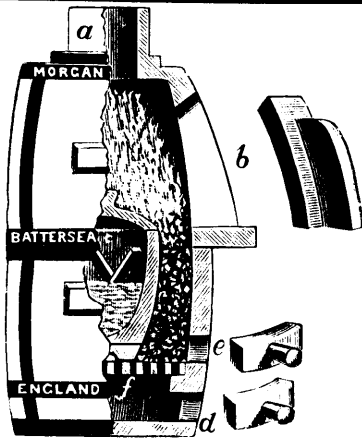
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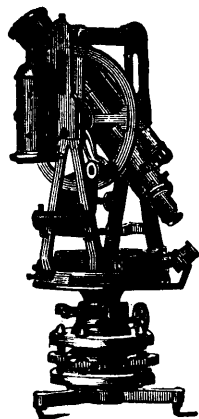
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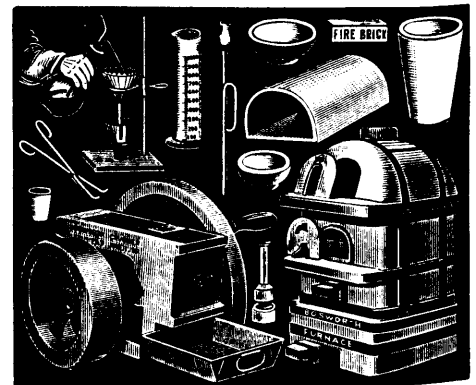
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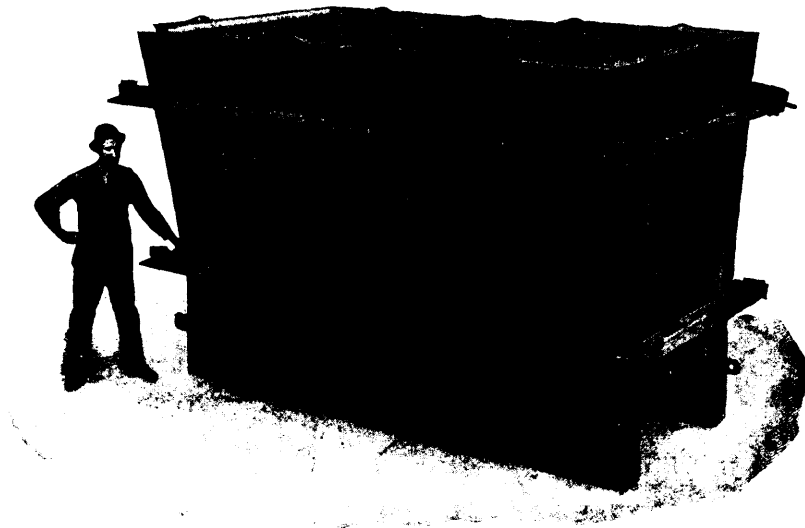
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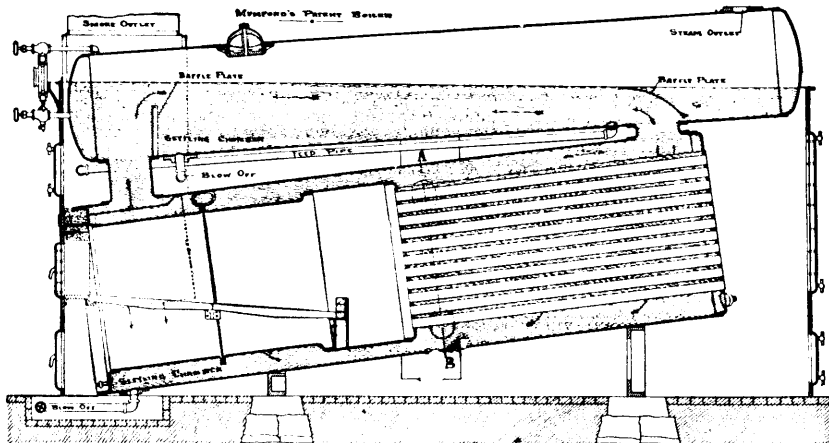
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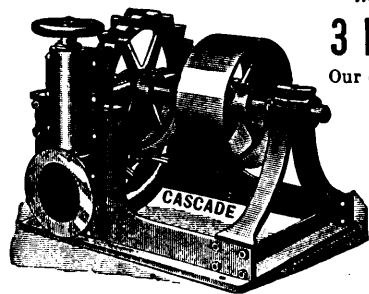
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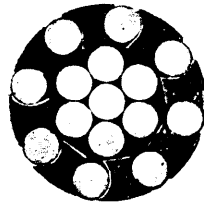
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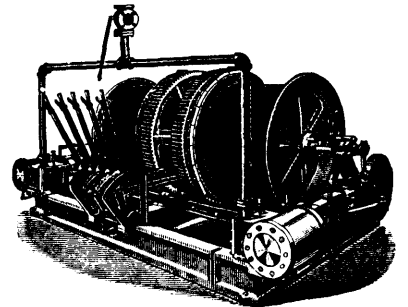
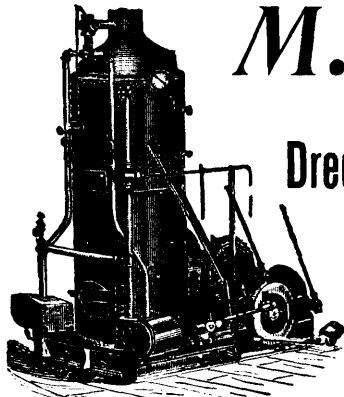
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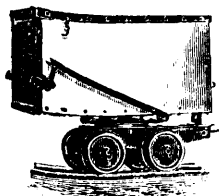
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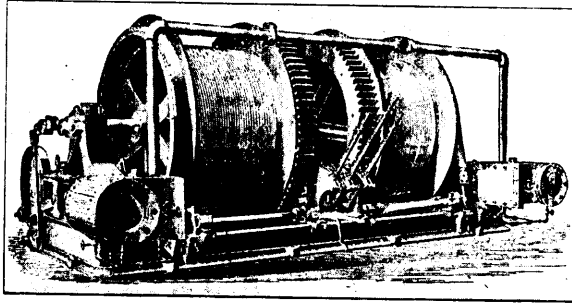
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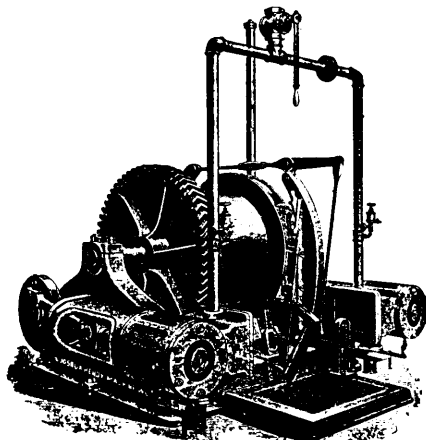
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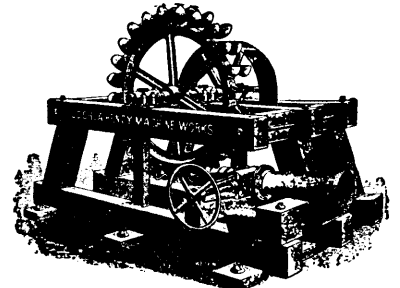
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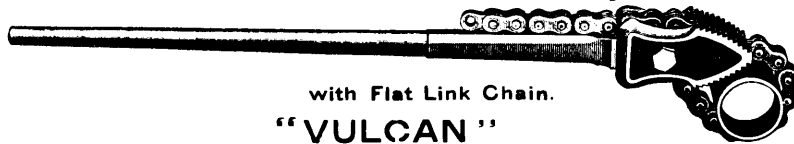
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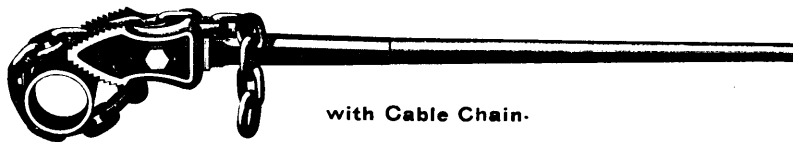
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The Mining Record.

Vol. V.

AUGUST, 1899.

No. 8

BRITISH COLUMBIA MINING RECORD

Devoted to the Mining Interests of British Columbia.

PUBLISHED BY

The Mining Record Limited Liability.

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All communications relating to the business department of the British Columbia MINING RECORD to be addressed to the BUSINESS MANAGER, B.C. MINING RECORD, P.O. Drawer 685, Victoria, B.C.

THE prospectus has just been issued of the Python Mining Company, Limited, of Kamloops, the capital of which is \$2,000,000 in shares of \$1 each: \$750,000 in stock being reserved for treasury purposes, which includes the erection of a smelter. The prospectus, which, by the way, is printed in gold ink, and bears altogether a very close resemblance to a Christmas card, is illustrated with a handsome engraving of the Python mining properties, "showing miners' cabins, shaft-house, main vein and

A HIGHLY SPECULATIVE KAMLOOPS PROMOTION. tunnel constructing to give depth of over 500 feet on main vein;" the site for the proposed smelter is also indicated. From this interesting sketch one at once concludes that the Python mine must be a veritable hive of industry. According to scale the two miners' cabins would be about a hundred feet long, with the other dimensions in proportion; the shaft-house, from whose tall chimney smoke is issuing in such dense clouds, an edifice wherein must be housed expensive and elaborate machinery; and the tunnel, a very extensive working indeed. But clearly this very admirable view is not intended to illustrate the present appearance of the Python "mine," but what it will resemble when all the shares have been subscribed for and dividends are repaying the lucky shareholders for having reposed so child-like a trust in the promises and predictions in which the philanthropic Python promoters so freely indulge. Meanwhile, it is fair to say, to prevent any possible misunderstanding, that the "shaft-house" covering the shaft—a hole in the ground some forty feet deep—is the merest shed, and that the tunnel "constructing" has at present no existence whatever, the direct statement to the contrary notwithstanding. Then, that the outcrop of the

vein should be so remarkably well defined, as is also shown in the plan, will certainly come as a revelation to those who have heretofore prided themselves on possessing some acquaintance with the Python ground, and their astonishment in this instance can be but slightly accentuated when discovering that the alkali pond at the foot of the hill has suddenly grown to the importance of a lake, which is presumably to supply the "smelter" with all necessary water required for its operation.

On the Board of Directors appear some respectable names of residents of Kamloops, and we are at a loss to understand how some of these gentlemen, except through crass ignorance, which is hardly excusable, could have lent themselves to a scheme so injudiciously promoted. A correspondent, however, offers the explanation that "the Board is purely a dummy one." The notion that "the Board is purely a dummy one." The secretary, a Mr. Douglas W. Willis, is a young Englishman, who, having been induced to invest a relatively large sum of money in the venture, received the appointment in consequence. The General Manager, a Mr. W. F. Wood, describes himself as "M.E." and "President of the Free Miners' Association of B.C."—we hear of the organization for the first time. Mr. Wood, together with a brother residing in Montreal, also acts in the capacity of vendor to and organizer of the company. With this commentary, we may now pass on to the information the prospectus affords us. We are told that: "The Python Mining Company consists of the following copper properties (*sic*): Python, Noonday, Copperhead, Wonderful, Calumet, each 1,500 x 1,500 feet square, and two fractional claims, all adjoining each other, and situated on Coal Hill, about three and a half miles south of Kamloops City, and is one of the largest and best groups of copper properties in B.C., having about 9,000 feet on main vein, carrying high values in copper, gold and silver."

Now, in proof, which, however, is, of course, for obvious reasons not stated in the prospectus, that the Python Company possess "one of the largest and best groups of copper properties in B.C." the work up to the present time performed on the claims comprises a single compartment shaft sunk to a depth of some thirty-five feet, a drift of thirty feet in extent, and approximately a hundred feet of surface cross-cutting. So far, some copper-stained rock has been encountered and some few stringers of copper pyritic ore. The vein, as proven, is, furthermore, much "broken up" and shattered, and exists so far as known on two claims only, owned by the company, the other properties mentioned being nothing more than tunnel sites. But to proceed: "The mines (?)," we are told, "can be worked all winter," but can the public? Then again, "The present company is formed with a view to obtain capital to erect a smelting plant for concentrating ores, and minimize the concentrating and transportation charges, which at present are \$16.80

per ton." If the Python Company was formed for the object alleged, then admiration for its shrewd promoter ceases at once. Is further comment necessary? The prospectus contains nothing further concerning the Python properties, except to quote the assay value of the ore, which we are informed, is "Copper sulphurets, or pyrites, rich in copper, gold and silver, in all cases self-fusing;" and the "average assay of the ore on the Python's main dump gives gold \$5.00 and copper 15 to 18 per cent to the ton (value \$53 to \$65). An assay by Mr. Pellew-Harvey, of Vancouver, returned \$79 in all values; by a Mr. Milton Hersey, of Montreal, \$93.18, for all values; and by the Kamloops Assay Office (which is the office of the vendor and general manager of the company, Mr. W. F. Wood, "M.E.") "value in copper, gold and silver of from \$30 to \$274 to the ton." It is not stated who sampled the dump and who selected the samples of ore, upon which Mr. Harvey and Mr. Hersey made returns.

The prospectus then quotes extracts from letters commending the property from Mr. Pegram, Manager of the Bank of British Columbia, from the Kamloops Assay Office and from Mr. M. P. Gordon Mayor of Kamloops. Mr. Pegram wrote on February 28th, 1899: "In reply to your favour re Python mining on Coal Hill, their property is thought to be one of the best. Outsiders state it has an excellent showing. The management are thoroughly reliable, straightforward gentlemen of this city." The letter was written, it will be noted, some months before the present prospectus was issued, but in order to be perfectly fair, we publish the communication in full. The value of the commendatory letters from the Kamloops Assay Office and Mr. Gordon may be estimated when, as we have already mentioned, the Kamloops Assay Office is the office of the General Manager, Mr. Wood, one of the vendors, and that Mr. Gordon is also interested in one of the properties. From information of a reliable character we are, however, given to understand that the Python claim is a tolerably good and promising prospect, which, if first developed and then capitalized at a reasonable figure, might give the public a fair chance of realizing on the investment. With the present capitalization of two million dollars, the greater proportion of which is devoted to promotion and other than treasury purposes, and the manner in which the concern has been brought out, the Python Mining Company, Limited, can only be regarded, to put it mildly, as a highly speculative and doubtful venture, which the public will do well to leave severely alone. Meanwhile, we regret exceedingly to learn that some 15,000 shares have been subscribed for at the ridiculous value placed upon them of 50 cents per share. It is true that with the money thus realized work on the property has been commenced, but even these expenditures are open to criticism. Instead of devoting the money, as might be expected to proving the property, the management have made a great outlay in constructing an expensive and unnecessary road up the hill to the claims, in installing a tramway, also at the present stage, unnecessary, and in building ore bins; the only actual mine work attempted being the improvement and timbering of the forty-foot shaft.

THE prospectus of the "Banner Gold-Copper Mining Company," of Greenwood, a copy of which has reached us, is a production that might

well have been the subject of criticism by the press of Boundary Creek. According to the prospectus the

company (with a capital stock of THE BANNER \$100,000, divided into 1,000,000 GOLD-COPPER shares of the par value of ten cents MINING CO. each), owns the Banner Fraction and Tip Top Fraction in Greenwood Camp. It is further stated that "the position of the company's properties is in itself a good guarantee of their worth, inasmuch as they lie within 1,000 feet of the Knob Hill and Ironsides mines and adjoining the Idaho. The Knob Hill and Ironsides smelter, the money for which has already been subscribed, will be built in close proximity to this property." The Knob Hill and Ironsides mines in Greenwood camp appear destined to play the same role in the promotion of new mining companies in Boundary Creek as the Le Roi and War Eagle took in the days of wild-cat promotion in Rossland. The leads in Greenwood camp run almost due north and south and the Banner Fraction and Tip Top Fraction lie to the west of the Knob Hill and Ironsides; therefore it is not plain why the success which has attended the opening up of the latter properties should be any guarantee as to the value of the former. It is also well known that the smelter referred to is being erected at Grand Forks, and not where the prospectus of the Banner Gold-Copper Mining Company places it. The cream of the prospectus is, however, the "report" on the Banner and Tip Top Fractional mineral claims by J. Fisher, "M.E.," which we here quote:

"These properties are situated in Greenwood Camp, Kettle River Mining Division of Yale District, British Columbia—in the heart of the now famous camp, and within a distance of 1,000 feet of the great 'Knob Hill' and 'Ironsides' mines.

"They comprise and cover an area of about 38 acres.

"The title of these properties is clear and perfect, being given by the original locators.

"The surface showings in these claims are identical with the large and wonderful showings of this particular camp, and the same as found on the 'Knob Hill' and 'Ironsides' properties.

"The ore showing is in the form of heavy outcroppings of quartzite carrying iron of an Haematite nature, and considerable copper, giving values in gold and copper of from \$4.67 to \$22.16, by assays obtained by myself and made from promiscuous samples from the surface croppings.

"The trend of the vein is northwesterly and south-easterly, and lies in a diorite and lime formation, that can be traced through these claims; the ore bodies being in contact and showing on the surface to be about 80 feet in width.

"I would suggest that these properties be developed by the sinking of a shaft to the depth of 100 to 150 feet, and then cross-cut, and so demonstrate the exact width of the ore body, which at that depth should be from 80 to 100 feet in width. There is no doubt in my mind that when such work has been done, high-grade ore of a similar character and nature to that of the 'Knob Hill' and 'Ironsides' will be found to exist in a chalcopryite ore in a massive solid body, carrying good gold and copper values.

"An abundance of timber and water for both mining and domestic purposes is to be found within easy distance on the ground.

"Transportation is easy. The line now being built by the C.P.R. runs within a distance of 1,500 feet of these properties.

"These are first-class properties and will in my

opinion make mines, and all that is necessary to make them so is development at reasonable depth.

"Respectfully submitted by

"J. FISHER, M.E."

It will be observed that after mentioning the Knob Hill and Ironsides mines—this was of course inevitable—Mr. J. Fisher, "M.E.," states that the title to the claims is perfect, being given by the original locators. We do not by any means dispute this statement, but we would be glad to be informed as to who the original locators were. Was Mr. J. Fisher "M.E.," one of them? Was he, or was he not one of the vendors of these claims to the Banner Gold-Copper Mining Company? Mr. J. Fisher, "M.E.," will probably be only too glad to furnish this information. Mr. Fisher, "M.E.," does not mention what work has already been done by the "original locators" to open up any ore body on the claims, but he manages to again work in the Knob Hill and Ironsides—in large print—and states that the surface showings on the Tip Top and Banner Fractions are the same as those on the Knob Hill and Ironsides. Will Mr. Fisher "M.E.," be good enough to explain what he means by "iron of Haematite nature," and by "promiscuous" samples—also what work was done at the time he made his report to show up an 80-foot ore body on the claims?

Mr. Fisher, "M.E.," states that there is no doubt in his mind that by sinking a shaft 100 to 150 feet and then making an 80-foot cross-cut high-grade ore of a similar character and nature to that of the Knob Hill and Ironsides will be found. We sincerely hope that such will be the case, but why does Mr. Fisher, "M.E.," not give us the reasoning on which he bases this belief. The omission is unfortunate, as information on this head coming from such a source must necessarily have proved instructive, not to say entertaining, though perhaps too technical to be easily understood by the general public.

Mr. Fisher, it may now be pertinently stated, is a young Englishman of more enterprise than education, who before coming to British Columbia some three years ago, had devoted his talents behind a counter as a butcher's assistant in the town of Barrow-in-Furness. One of his first exploits in this country was an unsuccessful attempt to "jump" the townsite of Greenwood. We regret to hear, presumably on good authority, that large numbers of the shares of this so-called "Banner Gold-Copper Mining Company, Limited," have been sold in Ottawa and Bolton.

LEADING United States statistical experts on gold supply, estimate from the results of the world's mining operations during the first half of the present year, that at the close of 1899, this twelvemonth will be found to have made an absolute record as regards the value of the world's gold yield. This is estimated to increase over the last record year—that of 1898—by at least \$60,000,000. Such an increase will raise to the phenomenal aggregate of \$340,000,000, the world's gold yield of the year. Yet this but seems to be a conservative estimate, if there be no interrupting war in South Africa, the present area of the largest expansion of gold output; for judging by monthly returns from South Africa, dating

since the beginning of the year, that region should produce \$26,000,000 more in gold than it did in 1898. Meanwhile, the general gold output of Australia more than holds its own, and we may safely reckon that the Yukon gold yield will advance from the \$10,000,000 of last year to about \$20,000,000 and perhaps even a little more for 1899. There will only be needed, therefore, a total further advance of \$10,000,000 in the steadily increasing gold yield of the United States and those of other parts of the world in which gold mining proceeds, to make up the estimated advance of \$50,000,000 in the aggregate of the world's gold production of 1898.

The world's gold production has, it may here be noted, wondrously increased during the present decade as a result of in part the discovery and development of new fields and in part, also, as the outcome of vastly improved mechanical and chemical processes, which have rendered it easily profitable to reduce large aggregate quantities of gold from a low grade ore, which once could not be treated to commercial advantage. Of the last development British Columbia now affords very significant and encouraging examples.

As illustrating the marvellous growth of the world's gold output, a recent issue of the *Wall Street Journal* states that for the thirty years, ending with 1890, the average annual gold production of the world was but \$115,000,000, or approximately a third of the estimated output of this year. During the aforesaid period of thirty years' mining, the gold products of the world never during any twelvemonth ran below \$90,000,000 nor rose above \$130,000,000. From 1893 the yearly average has been \$230,000,000 last year's output being therefore \$60,000,000 above the average.

It is meanwhile interesting to learn as showing the great effect which the enlarging output of gold must have upon the currency of the West, that it is estimated that little more than a fourth of the world's gold output is applied to the industrial arts, and that nearly seventy-five per cent. is devoted to money purposes.

There will consequently be many significant outcomes of this vastly increased yield of gold. Among these may be noted a certain further set-back to the bi-metallist movement for the restoration of a joint gold and silver currency in the United States. The greatly enlarging output of gold, seemingly now more or less commensurate with its increasing monetary use in the world will certainly thwart, at least temporarily, the movement to which we have referred; and though there are indications of some increased demand for silver in the Orient, another result of the increasing gold output will in all probability be the keeping of silver values stationary, a fact with which we must continue to reckon in regard to our silver-lead mining, and especially as concerning the lower grade producers. Again, a probable increase, though not perhaps very considerable, in the value of commodities in general on the American continent, is a not improbable contingency; the increases otherwise to accrue from the greatly growing output of gold being likely to be largely set off by increased and cheaper production due to more efficient labor and improved mechanical appliances. Last and not least, unless the tendency be thwarted by an epidemic of hazardous and largely profitless speculation, the present increasing output of gold in the world should lead to a continuance of the existing general conditions of active trade and industrial development, both in Canada and the United States.

The trouble in the Slocan and Ainsworth districts resulting from the eight-hour legislation, though perhaps less acute, still exists. In many cases, however, the owners meet the position by piece-work contracts. Notable instances in point are afforded by the Payne Mining Company, Limited, and by the Queen Bess Mines, Limited, near the town of Sandon work in each of these instances being done under contract conditions. In other instances the men are being paid by the hour at rates at or about \$3 a day, while in yet other cases miners are securing the \$3.50 rate. Much depends as regards the terms arranged on local circumstances. But unless the mine-owners and unions speedily come to terms there can be no doubt that the output of the Slocan district this year will be seriously affected. Again, if the mine-owners yield to the demands of the men, which to every fair-minded person, can only be regarded as unwarranted and unjust, it is to be feared that having won on this occasion, the unions will seize upon every trivial opportunity as an excuse for a "strike" in the future, and labour trouble thereafter will be the rule rather than the exception in the Slocan.

Apropos, our Slocan correspondent thus succinctly sums up: "The situation in regard to the operation, or rather non-operation of the mines, in this division has not altered materially since last month. In fact, judging by the apathy which is generally displayed, it would seem to be a matter of small moment whether they ever again enter the producing stage. We know of course that this is not so, for to the business man at any rate the prospect is simply alarming. Whispered rumours of important meetings, which somehow never come off, seem to be the extent of the activity on either side. The unanimity which at first prevailed among the mine-owners has in some degree broken down, as several of the mines are now employing men at "Union" wages, and many others will be forced to do so ere long, if only for the purpose of keeping their workings in safe condition. The unconcern of the miners, who appear to be in good demand elsewhere, coupled with the growing restlessness of shareholders as no returns are forthcoming upon their investments, render it imperative that operations be recommended at the earliest opportunity, and it would therefore seem as if the mine-owners are left with the one alternative of importing labour or conceding the demands of the miners. It is somewhat doubtful whether the former course is even practicable, but at any rate an attempt will probably be made before admitting defeat. Quite a number of the mines are seeking to evade the law by the sole employment of contract labour, but this can be at best merely a temporary expedient, stimulated possibly by the impression that Cabinet changes may bring about a repeal of the measure. From whatever standpoint the matter is viewed but one conclusion can be reached, namely: that a blunder on the part of the Government, coming at a most unpropitious time, has done more to retard the development and exploitation of the Slocan than all other causes combined. Shipments have not entirely ceased, but they have become so meagre as to be hardly worth mentioning in connection with a great industry, three hundred and fifty tons having represented the total output of the last four weeks."

There will be general satisfaction felt over the news that Mr. Justice Irving is in his decisions on the dis-

puted Atlin gold claims, making things very interesting for the claim jumper by ruling him "out of court" in regard to his pretensions. It seems, too, that Americans who located placer claims at Atlin prior to the Alien Act are somewhat surprised to find that even if there be some slight technicality opposing, their rights are as equitable "vested interests" recognized by the Judge. This is simply British justice, but our American cousins are a little surprised to see it so fully enforced. The Judge's decisions follow the excellent principle of recognizing interests fairly acquired prior to new legislation, and it would have been well if the Alien Act had done this to a larger extent than is the case. The present Attorney-General, however, prevented the full and proper recognition under the Act of certain rights previously acquired. Thus while the claims thus acquired by Americans in Atlin have to be recognized, the Act did not provide for American miners and prospectors, entering Atlin before its passing, the retention of the same rights as British subjects. This should have been done, after due registration of the name, as the Americans had in good faith expended time and money in making for Atlin, when there were no laws to prevent the acquisition of placer claims by aliens in that district.

Regarding the Atlin district itself the general consensus of opinion seems to be that the gold output this season will be very inconsiderable. Whether the country is as rich as the public were given to understand appears now to be extremely doubtful, and judging from the accounts brought down by the hundreds of forlorn and disgusted men who have returned and are returning daily from the Atlin gold-fields very much poorer than when they started, the reported abundance of alluvial gold in Pine and other creek claims was grossly exaggerated. For the "booming" of the district the transportation companies, notably the White Pass and Yukon Railway Company, are held culpable. The limitation of the gold output, however, is further largely ascribed to the disgraceful and slipshod manner in which the affairs of the Government office were administered by Mr. Graham's predecessor. As an instance of this it is alleged that many claims were not, through carelessness, recorded by the Mining Recorder, notwithstanding that application was made in proper order, and that the applicants obtained receipts in acknowledgment of the payment of their fees. In consequence these claims were "jumped" and work stopped upon them pending the legal settlements. In justice to Mr. Rant, if not in the public interests, an official investigation should be held to determine the truth or otherwise of these very serious charges of official negligence.

Another cause of claim-jumping in Atlin is the fact that claims instead of being numbered after the fashion adopted in most placer mining fields, as numbered so-and-so below or above discovery, are described by some fanciful name, such, for example, as the "Sarah Jane" or "Blue Pig." The "Sarah Jane" may be jumped a dozen times over and neither the Recorder nor anyone else will know its exact situation. This is a miner working his claim may be suddenly confronted with an order from the Gold Commissioner to suspend operations, a sworn statement having been made that ownership was disputed. This has happened not once but a dozen or more times in Atlin during the

past few weeks. It is reasonable, however, to suppose that had the location of claims been adequately and distinctly defined the Gold Commissioner would have had sufficient evidence on his books of their ownership, and hence rightful owners would not have been disturbed by "jumpers" in the manner described, and against which complaints are so bitter.

One leading point in an interesting address recently delivered by Mr. H. Hirschel-Cohen, as Chairman of the Mining Committee of the British Columbia (Victoria) Board of Trade, was that the present mining code of this Province allows a too easy holding over of claims without the doing of adequate development work thereon, in consideration of an unduly small money payment to the Government. Mr. Cohen, moreover, contended that the Provincial Treasury hardly receives, as compared with similar levies of other countries, a sufficient return in royalty, licenses, company registration, transfer fees and other payments, to compensate for the drain made of natural wealth—which is irreplaceable—of the country. There is no doubt that the mining laws of the Province require some amendment, in order to prevent the locking up of claims, year after year, sometimes by evasion, due to collusive relocations under a new name, sometimes as a result of compliance with the too easy payment conditions of the Provincial laws. It should not, however, prove very difficult to meet the evil by reasonable amendments of the present law. With regard to obtaining a larger proportionate return by the Province in respect of its metalliferous mining, such a change can only with advantage be made gradually, as the industry grows larger and mine development more generally remunerative. Meanwhile any considerable addition to existing dues might have the effect of impeding the development of claims held by genuine workers of small means. When, however, our mining begins to show large dividends and profit earning undertakings widely distributed, instead of as now, mainly found restricted to West Kootenay, the Province will probably find it expedient, directly or indirectly, to raise a larger proportional revenue from its mining industry, devoting in return a large proportion of the increase to works of permanent public improvement in aid of that industry. Under present conditions it would, we think, be hardly advisable for the Government to make any great change in the amounts or application of the various fees and taxes, which affect mining, and in particular precious metal mining in British Columbia.

The more influential journals of the Provincial mining press, meanwhile appear to think that Mr. Hirschel-Cohen's suggestions as to increased levies in respect to claim-holding and mineral output are at least premature, and would, if now adopted, work hardly against the miner or prospector of small means. There is, however, general approval of Mr. Cohen's suggestion that the Government should cause the more frequent issue and circulation of duly certified reports of the progress and output from the various mines of British Columbia.

As a result of our criticisms last month of the prospectus of the Boston and British Columbia Copper Mining and Smelting Company, we have received a number of letters of enquiry, chiefly from people re-

siding in Boston, who have been unfortunate enough to invest money in this concern. One correspondent writes: "The company deny *in toto* the statements contained in your article, and the General Manager, in a letter to me, states that the individuals associated with the company are men of high character, who have every confidence in the success of the venture." This is indeed quite possible, for already, we understand, a number of shares have been sold, and doubtless that is all the success the promoters in their most sanguine mood hoped to realize. Another correspondent informs us that the company's manager has explained to him "that the criticism which appeared in the MINING RECORD was probably instigated by spite, as the company's venture conflicted with others in British Columbia." And yet another writes: "As I have not yet made the final payment on the stock I am holding in the Boston and B.C. Copper Mining and Smelting Company I am anxious to learn all I can with regard to the company's properties in British Columbia in order to save myself, if possible, before it is too late. You have already done a great service to the public by your warning." To these correspondents we have taken the liberty of forwarding copies of a letter sent to this office from the Editor of the *Engineering & Mining Journal*, of New York, whereof the following is an extract: "Our remarks appear to have greatly interfered with the plans of the gentlemen who are floating the Boston and British Columbia scheme, and I have had a two days' siege from Mr. Crosbie, who came from Boston to see me about it. On the whole, while he bitterly denounced your 'lack of knowledge and partiality,' as he called it, he has confirmed the information you have given, so far, at least, in that he has paid \$3,000 on account of the price of the property, which was \$75,000, and the balance he gives in shares. I have vainly endeavoured to convince him that the price at which he is selling stock is out of proportion to its value, as measured by its cost. This morning he was in again and told me that some who were going to put in a considerable amount of money had held out after seeing our article and that they would probably come in to see me—a wholly unnecessary proceeding, for I never advise people about investments in mining or other things beyond telling them to use the same precautions that they would use in other investments, and which every business man knows, or ought to know." To this we have only to add that from what additional information we have been able to gather, we have no reason at all to qualify the remarks which appeared in the MINING RECORD last month on the methods employed in the promotion of the Boston and British Columbia Copper Mining and Smelting Company. We, however, are given to understand that the figures of ore in sight on the Standard claims, as given by the men who reported on the property, were doubled in the prospectus.

How little, good and even distinguished, names sometimes mean in the case of a Board of Directors in an English company promotion, has again been illustrated by the case of the Kootenay (Perry Creek) Gold Mines, Limited, which lately in London asked for a capital of £60,000 to buy and work the Pearl, Elkhorn and Ruby Fraction gold claims on Perry Creek, East Kootenay. On the Board of the Company appear the names of Sir Edward Leigh Pemberton, K.C.B., Deputy Chairman of the London, Chatham and Dover Railway Company, and the Hon.

Herbert Knatchbull-Hugessen, a son of Lord Bra-bourne, a director of the Rhodesian Mining and Finance Company, Limited. This did not, however, prevent the London *Morning Leader* from commenting most adversely and seemingly with justice on the attempted flotation, the company being formed to take over for £35,000, £7,000 payable in cash and £28,000 in shares, three claims, the two largest of which were acquired by a previously formed syndicate, since wound up, for £4,500 only. The prospectus of the company we may add, quoted Dr. John E. Hardman's assays of some of the free milling ore on the claims, which looked fairly good. But it did not quote the report of the British Columbia Minister of Mines for 1897, wherein it is stated of the Perry Creek claims as follows: "On Perry Creek, the large ledges of quartz mentioned in the report for 1896 received a good deal of attention and Mr. John E. Hardman erected a small mill for stamping purposes, but the result of the season's work was that this quartz, so far as prospected and tested, proved to be very low grade and to carry very little gold, that could be saved by any free milling process." Clearly a good company for the British investor to keep out of on the terms proposed by Sir Edward Lee Pemberton, K.C.B., and his colleagues on the Board of Directors.

A doll presented by Mr. Whittaker Wright, the promoter of the British America Corporation and the Le Roi Mining Company, Limited, to a recent bazaar in aid of the Charing Cross Hospital, London, realized more than £300. This was seemingly due to the fact that the doll had in its pocket a "right of call" for 500 Le Roi shares at par though the stock was at a premium. Soon after the bazaar the Le Roi shares rose for a while, though they are now much lower, to £4 premiums. Hence the buyer of this rather costly doll may have made, however, about £2,000 on his purchase. Mr. Whittaker Wright clearly "killed two birds with one stone" by his gift of the doll and its pocket contents, for he aided deserving charity and simultaneously advertised and boomed one of his pet ventures. A shrewd man is Mr. Whittaker Wright.

If the compiler of "Mining Supplement No 6" to the *Financial News*, recently published in London, had contented himself with facts and left fiction, which is the prerogative of novelists and provincial statesmen, alone, his publication would have had a greater value. As it is the "Mining Supplement" bears throughout the imprint of the professional boomster. Then the inaccuracies are awful. We would like to hear what Mr. E. H. Webber has to say when he reads the following, "but the mill being erected by the B.C. Bullion Extraction Company will soon be ready to treat the low-grade ores that do not contain more than a small percentage of sulphides." If we mistake not this mill was completed about nine months ago. It was then turned over to the company and had a run under Mr. G. V. Hopkins before the snow of last winter fell. The indiscriminate use of the word "mine" is an especially noticeable feature in this compiler's composition. Every hole in the ground with him is a mine. This promiscuous use of the word cannot be defended. To put it mildly, it is very misleading. "Mine" is a word that should be used with great caution, after the experience of the past. We have no objection to a little optimism now and then, but even this indulgence should be hedged about with a conscientious regard to facts.

Dr. Rossiter W. Raymond, the noted American mining engineer has recently contributed some interesting articles to the *Engineering & Mining Journal* on the subject of "Lead Smelting in British Columbia." Referring to the management of the Trail smelter, Dr. Raymond pays, what is in a sense, a very high compliment to the C.P.R. He states that in his opinion the operation of these works by the railway company, is a great advantage to the mining industry of British Columbia; "for the railway company appears to be willing to do what separate concerns could scarcely undertake, namely, to reduce smelting rates to figures involving little or no profit, with the view of increasing as rapidly as possible the active development of mineral resources, and consequently the amount of business for the railway." He adds, "I read a good many local newspaper articles, of a type familiar to me attacking this 'grasping corporation' but "with regard to the present course of the Canadian Pacific Railway Company toward the mining industry of British Columbia, I am convinced that it is more liberal than any independent enterprise could pursue." Still more interesting are Dr. Raymond's views on our lead smelting industry: "So far as the mere cost of smelting and the production of base bullion is concerned, the Trail works," he thinks, "can probably compete favourably with American establishments, but they are handicapped in the sale of their product by the fact that there are no refineries in Canada which can transform base bullion into the marketable forms of pure lead and pure silver or dore bars. Nor would it be prudent to build a refinery for such purposes before a sufficient steady supply of base bullion had been assured to it. The alternative, of course, is to send the bullion to be refined in bond in the United States, until it will pay to do the refining in Canada. Under the United States law, this can be done without the payment of an import duty, but unfortunately the Canadian law, as now administered, requires the refined lead to pay a duty of 15 per cent. upon its re-entrance into Canada. At the same time, lead imported from England is favoured in the Canadian tariff by a differential deduction of 25 per cent. of the duty. The result of this curious arrangement is that the Canadian producer, after having his lead refined in the United States, may be forced to sell it in England and have it re-imported from there. This practically deprives him of any advantage in the Canadian market. That market is small, the consumption being only some 3,000 tons annually, but to this small extent it seems fair, Dr. Raymond opines, that the Canadian smelter should have the natural advantage of his geographical location, by being enabled to bring back to Canada, free of duty, the lead produced in Canada and refined in the United States. This, in his judgment, would be the simplest, most equitable, and most effective way of encouraging lead smelting in the Dominion, while enabling the Canadian consumer to obtain Canadian lead without paying the unnecessary cost of its transportation twice across the Atlantic. Reduced to its lowest terms what the smelters really ask for is another bonus, in addition to the \$30,000 annually granted, of \$37,000, the amount at present now collected on the annual imports of lead. As we have already stated, the Dominion Government has this matter now under consideration, and it seems likely that the British Columbia smelters will be accorded the additional assistance for which they are asking. Meanwhile it is interesting to learn that the Hall Mines smelter com-

plain very bitterly about the low price at which the Trail smelter is bidding for lead ores, as reported by Dr. Raymond, and they even go so far as to question the possibility of profitably treating Slocan ores at figures Mr. Aldridge is seemingly able to quote. We cordially agree with Dr. Raymond in his view that our local lead smelting problem would be rendered a great deal less complicated if it were possible to establish refineries in Canada. But whether the present production of ore in the Kootenays is sufficient to justify this seems somewhat doubtful, which notwithstanding, many of our readers will be no less interested to learn that the erection of refineries in the near future is seriously contemplated by both the C.P.R. and the Hall Mines, Limited.

The fact that the Crow's Nest Pass Coal Company shipped last month 10,000 tons of coal and 2,000 of coke shows that this young industry, not yet a year old, has already attained significant proportions. The company is, in fact, as last month's figures show, contributing already about 12 per cent. of the total coal output of British Columbia, and more than half the coke shipments. In both cases colliery and coking extensions will make considerable additions to the yield, ere the end of the year. A new mine is about to be opened at Michel and the coking ovens will be increased to 400. How keenly and successfully the Crow's Nest coke competes with American fuel in the smelting districts of Montana, has just been shown by the fact that the American coke smelters have lately largely reduced their prices in order to compete with the Fernie importations.

The new manager of the mines of the Crow's Nest Pass Coal Company, Limited, Mr. James Johnstone, is a Britisher by birth, but gained experience as a railway surveyor in Canada on the C.P.R. and afterwards as a very successful colliery and coke works manager at the coal mines of Pocohontas, in Virginia, where from an excellent coking coal is produced, though, according to Mr. Johnstone, inferior to the East Kootenay product. The mines at Fernie are finding the American competition at the Montana smelters the more formidable, as the owners are interested in coal mining also. The smelter managers and foremen are consequently in a difficult position, for though they frankly admit the superiority of the British Columbia product, they have, nevertheless, to make the best of the American product, and utilize as much of it as possible, in order to satisfy the owners. The Crow's Nest management is, however, sanguine that the intrinsic qualities of their coking coal will gradually bring it well to the front, even in Montana, and as against colliery competition in which American smelters are also considerably interested. The policy of the Fernie concern will, however, as it is stated on the best authority, be one of British Columbia first, as the management believes that the big future of that colliery industry lies in this Province. Hence they will give no preferences to American competitors of British Columbia enterprises.

A brief comparison of the present mineral output of Ontario with that of this Province is suggestive. Ontario last year yielded mineral products valued at \$7,201,891 as against an output in British Columbia of \$10,006,861, the outputs of stone and other building material, nickel, copper and iron, bulking very largely in the case of Ontario,

where, however, from the western region a fair yield of gold is beginning to be got.

The lateness of the summer or working season in Cariboo this year will to a certain extent reduce the output of the hydraulic gold gravel and placer mines of that country. This notwithstanding, increased returns are expected from several of the well established companies. Thus the Cariboo Consolidated Hydraulic Company confidently expects to make a considerable gain on its last season's output and has already washed up between \$46,000 and \$48,000 worth of gold from the grounds. The company has now succeeded in obtaining an ample water supply and its directing manager confidently expects the long and productive mining existence which the large amount of capital and skill expended upon the undertaking thoroughly deserves.

The first shipment of ore to the smelter at Trail from the Windermere district of East Kootenay merits chronicling, for many entertain high expectations regarding the future of this district. The shipment made consisted of twenty tons of ore from the Delphine claim. Galena was the chief constituent, but there was also some copper and a little gold. The smelter returns realized, it is stated, over \$83 a ton, a very fair value indeed.

It is already clear that the Trail Creek district will this year make a large advance of output upon that of 1898, which in its turn showed a big increase on 1897, the shipments being 68,804 tons in 1897, and 111,282 tons last year. Already up to July 22nd the Trail Creek shipments of the year amount to over 700,000 tons, and at the rate of progress now being made the Trail Creek output for the year should easily exceed 150,000 tons. The Centre Star is now beginning to be a considerable Rossland shipper and should henceforth bulk largely in the shipments of Trail, the output of the mine for the third week of July being 632 tons, or rather more than half the output of the Le Roi. The Centre Star is of course one of the "coming mines" of Trail.

The Cariboo mine at Camp McKinney still continues to make an excellent showing, the dividend declared last month swelling the total profits of the mine to date to the respectable amount of \$348,000 in round figures. Shareholders have received in all twenty-seven dividends, last month's division of profits being \$12,250. The success of the Cariboo mine, apart, of course, from the intrinsic value of the property, is largely due to, in the first instance, systematic development, good management, and a reasonable capitalization. A few more Camp McKinney "Cariboos" in British Columbia would do more towards obtaining recognition of the value of our mineral resources than all the other kinds of advertising employed put together.

The proof of the undoubtedly great mineral resources of the Boundary Creek district should not now be long wanting. Since the commencement of construction work on the Columbia and Western Railway a very noticeable progress has taken place in the development of the better known mine properties and with the completion of the railway to Midway a number of mines will be in a position to produce ore in a limited way. Meanwhile, the erection of a smelter is well under way at Grand Forks and

the C.P.R. have under consideration the establishment of a second elsewhere in the camp. Ore production will also be greatly facilitated by the construction of branch railway lines to all the principal camps; in fact, no mining section in British Columbia will, when the C. & W. road is completed, be better provided with transport facilities than this district.

The final incidents in the brief life histories of two miscondacted undertakings, in regard to each of which most regrettable misrepresentations were made to the loss of investors, are now happening. The Golden Cache has now been acquired by a Toronto syndicate, the intention being to work the property again, and if the results are satisfactory afford the old shareholders a first opportunity of purchasing shares; and the site and premises of the long defunct Vancouver smelter are being transferred for value to new purchasers. The ill-adapted building and site will not again be used for smelter purposes, but probably instead adapted to the purposes of a small iron-works.

One result of the visit of the Hon. F. Carter-Cotton as Finance Minister to Golden and Windermere may be the building in East Kootenay, of one or two of the toll roads lately sanctioned by the Legislature, the Provincial revenue being at present inadequate to provide all the mine roads that are necessary to the development of the Interior district.

Two "booms" of alleged new gold finds of importance have lately collapsed. One, that at Cape Nome, on the bleak Alaskan coast, was a most villainous business; the agents of a large transport and trading organization having by false assertions and pretences lured hundreds of unfortunate miners in wintry weather to an unsheltered timberless point. These men find little or no gold, but in some cases instead death from scurvy or exposure. The other ill-founded "boom" of black sands near Wreck Bay, Vancouver Island, was due to no fraud, but simply to over confident exaggeration of one or two exceptional finds of deposits of gold on the sands. It involved no very great hardships for those who went to Wreck Bay, who merely wasted a little time and money on their visit and easily returned to Victoria or Vancouver. The black sands at Wreck Bay, as in most other cases on the Pacific Coast have been found to contain too little gold and that too fine for profitable recovery. Appliances have yet to be invented and perhaps never will be, sufficiently serviceable to extract the gold that is usually found in sands on the sea shore. When gold is there deposited, it is much as when it is in the sea itself, practically irrecoverable, under present conditions. And so it was at Wreck Bay, save in a very few exceptional cases where good wages are for a day or two stated to have been earned by a few panners.

Texada Island is reported to be enjoying a "boom," as a result of the opening in connection with the Van Anda mine of the first smelter of the Coast district. As such it deserves to be chronicled here, though its daily capacity is at present only fifty tons and should be almost completely taken up by the output of the Van Anda mine itself, which the owning company estimates at an average of 35 tons a day. Whether this

estimate is correct is another question, which may be more easily answered in three or four months from now. Meanwhile, it is significant that Van Anda shares are in great demand at treble the price at which they were quoted some few weeks ago, and this presumably on the strength of the "blowing in" of the smelter this month.

As we predicted last month, registration of the company recently formed in London as the Cariboo Consolidated, Limited, has been refused in British Columbia on the grounds of the similarity between the name given the company and those of two well-known Provincial mining corporations, *i.e.*, the Cariboo Consolidated, at Camp McKinney, and the Consolidated Cariboo, in the Cariboo district. If the London company has gone to allotment this check will prove somewhat inconvenient.

Rosslund should be interested in learning that it now boasts among its residents probably one of the most expert mineralogists in the whole of America. —Mr. W. F. Ferriers, late of the Geological Survey. Mr. Ferriers' private mineral collection is second only in completeness to any on this continent.

If our mineral display at the Paris Exposition is incomplete it will certainly not be the fault of the Provincial Mineralogist, Mr. Robertson, who has been simply indefatigable in his efforts to secure a representative collection of ore samples and specimens from the various districts. Mr. Robertson has been successful in obtaining the co-operation of the Boards of Trade in the mining centres for the prosecution of the good work, and the C.P.R., familiarly known as the "grasping monopoly," the Golden and Windermere Steamship Company, and the Nelson and Fort Sheppard Railway Company have come forward with offers of "free transportation" of all ore intended for exhibition purposes.

It is a trite enough saying that one has to go away from home to learn the news. Enquiries have recently been made from New York to the Provincial Mineralogist regarding the whereabouts of immense deposits of amber reported to have been discovered in British Columbia. Amber as a rule is not found in deposits, nor, so far as we can learn, has it yet been discovered in this Province.

The West Kootenay Brick and Lime Company, of Nelson, is in addition to its chief staple trade of brick-making, now turning out a large quantity of lime—about 1,000 tons per annum being the present yield. It is also doing further work in developing certain other subsidiary mineral resources of West Kootenay, in quarrying marble, which is now being used for the frontage of a prominent business premises in Nelson. The marble comes from a quarry opposite Kaslo. Some day the marble quarrying industry of the Province will assume very considerable and profitable proportions. There are excellent marble deposits on the Coast at Texada Island and other points, as well as in West Kootenay. At present, of course, the industry of marble quarrying in this Province is quite in its infancy.



THE PIONEER TELEGRAPH SURVEY OF BRITISH COLUMBIA.

By the late P. J. LEECH, C.E.*

I WAS engaged by the Western Union Telegraph Company in the year 1866 when they were constructing the line with the intention of carrying it through British Columbia and Alaska to Behring Straits, crossing Behring Straits with a cable, and continuing to St. Petersburg, Russia.

quest of the Telegraph Company to act as stipendiary magistrate), and W. Burrage (one of the quartermasters of the company).

The working party were then about sixty miles W.N.W. of Quesnelle.

My duty was to survey the line, make a reconnaissance of the country through which the line passed, determine the latitudes and longitudes of the several stations which were to be twenty-five miles apart, make regular meteorological observation and report



BURNS HAD EXPLORED FROM QUESNELLE TO FORT FRASER.

I left Quesnelle on the 6th June, 1866, in company with Conway (the superintendent of the work); T. Elwyn (who was sent by the Government at the re-

* This article was written for the B. C. MINING RECORD, by the late Mr. P. J. Leech shortly before his death last month. The notes are practically a literal transcript from his field book and diary during that survey.

generally on the nature of the country. We caught up with the working party on the 12th of June.

The previous year (1865) several exploring parties had been sent out to select the best line of route to be followed, bearing in mind that the line was to be as near the coast as possible for the purpose of getting supplies to the several stations by means of the

ivers, but to keep clear of the coast range of mountains.

Out of the lines which were explored that selected by a man named Burns was adopted. He had explored from Quesnelle to Fort Fraser, a distance of about 135 miles, and at the time that I joined he was exploring from Fort Fraser to the Skeena River, a distance of about 270 miles.

The line of route having been selected, a surveyor (J. McClure) having a rough sketch of the country went ahead with two or three axemen and blazed the trees, keeping as straight a course as the nature of the country would permit. Then came the choppers (about 80 men) who cut down all the trees within a width of 12 feet, next a man, who paced distances of 70 yards, and at the end of each distance drove a stake in the ground; after him came a party of Chinamen, who dug holes where the stakes had been driven; then a party of axemen, who cut poles on which to string the wire; next the pole-setters, whose duty it was to nail the bracket on the pole, place the insulator on the bracket and set the pole upright in the hole, filling in the earth and stones and stamping it well down; lastly, came the wire party, who strung the wire on the poles.

Thus at the end of each day we had telegraphic communication with civilization.

In addition to the parties above mentioned there were others employed making trails, building bridges over streams and making rafts at the crossings of rivers.

Our supplies were brought from Quesnelle by trains of mules and horses. We had a band of horned cattle with us, so that we had plenty of fresh meat.

At the end of September work was stopped for the season, we having reached a point on the Kispyox River about 50 miles W.N.W. of the Indian village of Kispyox, which is situated at the confluence of the Wastenqua or Bulkely River with the Skeena. Kispyox is about 130 miles from the mouth of the Skeena. We built a large house at Kispyox and called it Fort Stager. Burns had explored about fifty miles beyond the termination of the line, and had got to what he considered was the Naas River. Our object was to strike the Stikine River, near the mouth of the great Canon, which is about 170 miles from the mouth of the Stikine.

The country lying between Quesnelle and Westroad River is heavily timbered, gradually rising from Quesnelle.

From Westroad River to Lake Tchinkut the country gets more open and park-like, and continues so to Fort Fraser.

From Fort Fraser to the Skeena the country becomes still more open in some places, the grass (red top and blue joint) grows so high that horned cattle cannot be seen in it, and it was so thick with peavine that it was hard work to walk through it.

The general reading of the barometer was 26.5 inches, which indicates an altitude of about 3,300 feet above sea level.

I counted twenty-four different kinds of fruits growing wild. Raspberries, strawberries, serviceberries, gooseberries and currants amongst them.

On the stopping of the work the whole party returned to Kispyox, and an exploring expedition was then organized to proceed by sea to Stikine, up the Stikine River to the great Canon and then to explore in the direction of the Yukon River, and from the Stikine in an E.S.E. direction to strike the point where Burns had struck the Naas.

Elwyn was put in charge of the party, and I was made second. The party consisted of 15 men, all told.

Boats were built to take the whole of the working party to Fort Simpson. Elwyn did not wait for the boats, but got a canoe, and taking twelve of the explorers with him, started the day after our return to Kispyox. I was obliged to wait for the boats, as I had to hand over my notes to the draughtsman.

We reached Fort Simpson all right on the 18th of October and the 19th the Hudson's Bay Company's steamer *Otter* and the Telegraph Company's steamer *Munsford* arrived and took all hands to New Westminster, excepting myself and Frank Bourgeois (a Frenchman), who were to get to Stikine in an Indian canoe, with three Indians and the wife of one of them.

We started from Fort Simpson on the 21st October and arrived at the Telegraph's depot on Wrangel Island, near the mouth of the Stikine River on the 29th. In the journey we had one narrow escape.

On the 21st we were obliged to lay over in camp because it was blowing a gale from the southeast, and we had a twenty-mile crossing to make.

On the morning of the 25th the Indians thought we might venture out. We had not got more than half way across when we saw the gale coming up again. The Indians rolled the sail around the mast until there was only six inches exposed to the wind, and we ran before it. Suddenly I heard the woman, who was sitting behind me cry out. I looked round, and there right on our port quarter was a great wave curling over our heads. It broke into the canoe, nearly filling her with water. I jumped up and handed a camp kettle to the woman, who commenced bailing and all the rest paddled for their lives. The gale abated shortly afterwards and we made a safe landing, but I never was so scared before or since.

When we landed at the depot on Wrangel Island I found two men there, one Charles Simpson, in charge of stores, and the other Charles Morrison, an old friend of mine, as assistant. Morrison took advantage of the return of my canoe to Fort Simpson, and went there for medical advice. I learned that Elwyn had gone up the river just a week before I arrived.

I tried to get Indians to take me up the river but none would go. They said that the ice had begun to form and it would be impossible to get up, and that it would be better for me to wait until January, when the ice would be strong and walk up on snowshoes. Accordingly I decided to wait until January.

About the end of November the Telegraph Company's steamer *G. S. Wright* came down from Behring Straits and anchored opposite the depot. Conway had given me a letter for Col. Bulkely if the *Wright* should happen to call in. I went on board gave the letter to the Colonel, who invited me to dinner, and I spent a very pleasant evening.

The day before Christmas the Hudson's Bay Company steamer *Otter* came in, bringing C. Morrison and Dr. Chismore. The Doctor brought 900 pounds of pemmican for the use of the explorers.

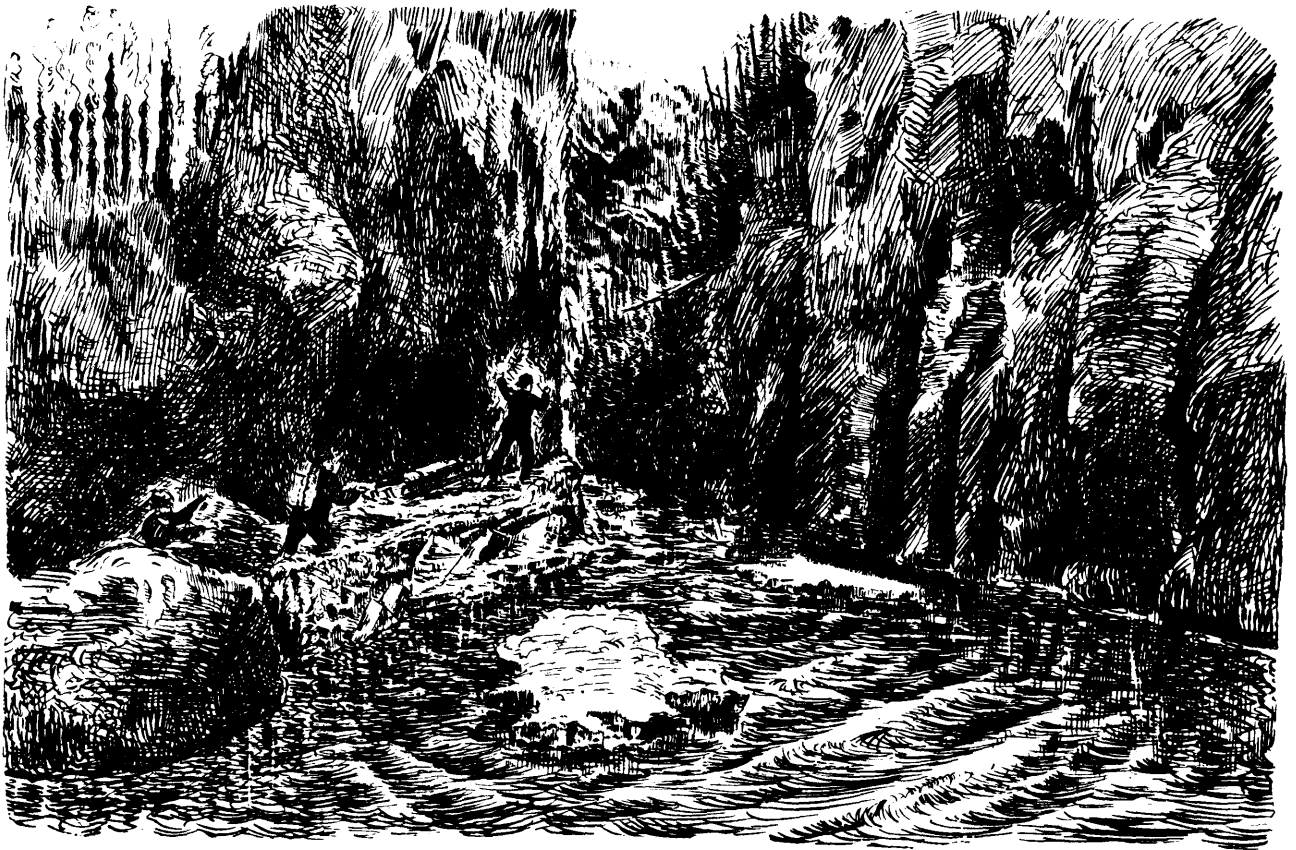
The *Otter* left on the 2nd January, 1867. We then commenced making preparations to travel up the river. We got our snowshoes in order, made three sleighs, and tried to hire Indians to go with us, but one after another, after promising to go, all backed out, and it was with great difficulty I prevailed on two young men to agree to take Dr. Chismore. F. Bourgeois and myself in a canoe to the commencement of the ice in the river. All our arrangements being completed we left the depot on the 23rd Janu-

ary, taking the precaution of telling those who remained to keep a sharp look out for a signal fire during the succeeding twelve days, as it was possible we might have to turn back.

The depot was situated on the north end of the island, the island being separated from the main land by a strait about four miles wide, and the depot was distant from the mouth of the Stikine about six miles in a straight line. We crossed the strait and made our way along the shore, about 3 p.m., reaching the mouth of the river, but the wind was blowing so strong down stream that we were obliged to put back and camp outside.

Next morning, the wind having abated, we managed to get up to the ice, about two miles from the

packed up and started back, and as long as I live I will never forget that day's journey down the river. It blew a perfect hurricane down stream, and the snow came down so thick that I could scarcely see ten yards ahead. I was thrown down several times by the force of the wind. At one time I was thrown down with such force that I was stunned for a few minutes. We got back to our old camp at 4 p.m. and fixed up for the night, resolving that if the snow-storm ceased by morning Frank and the Doctor should make their way over the rocks to the mouth of the river and make a signal fire so that those at the depot might send a canoe for us. Next morning it was still snowing, and so it continued until the morning of the 29th, when the Doctor decided to wait



“THE DOCTOR INSISTED ON GOING BACK.”

mouth of the river, at noon and camped. I sent the Indians back with the canoe to the depot the same day. The following day (25th) we packed our provisions, etc., on the sleighs and started up the river, walking on the ice, which was as smooth as glass, with here and there small patches of hard snow about an inch deep. The weather was clear and fine, but a strong wind from the northeast blew down stream and retarded our progress considerably. We made only three miles by 4 p.m. I had been unwell for about a fortnight before we left Wrangel, and this day's journey told on me. The Doctor insisted on going back, expressing the opinion that if we were to persevere I would not reach Buck's Bar alive. Buck's Bar is at the mouth of the great Canon. That evening the barometer fell and the sky became overcast, threatening snow. When we awoke in the morning there was a covering of snow on our blankets about four inches deep, and it still continued. At 8 o'clock we

no longer. A question then arose as to whether they should take snowshoes with them. We had four pairs with us. Neither the Doctor or myself had ever used them, but Frank had lived four years on the Upper Stikine, where the Indians use them six months in the year. We therefore thought he was an authority on the subjects. He said that it would be useless to take them while the snow was fresh, that a man could not walk with snowshoes unless a crust was formed on the snow. Accordingly they went without snowshoes, taking their blankets and five days' provisions with them, and the last words the Doctor said were: “If you do not hear from us in five days you may be sure something serious has happened.”

I had a small tent which I had made myself, in which I kept my provisions. I had five large blankets, of which I made a sack so that when I got into the sack I had five folds under and five over me. Five days passed and ten days passed and there were no

tidings of the Doctor or Frank. I had put myself on short rations when they left, and on the tenth day I took stock of my provisions and found that at the rate I was living I would have enough for one hundred days. When ten days had passed without any news, I gave them up for lost and concluded that if they were lost there would be but a poor chance for me if I followed them. I therefore made up my mind to remain where I was until May, when the interior Indians would come down to trade with the coast Indians.

During this time I got up at 9 a.m., lighted my fire, had breakfast, and a smoke, then went chopping firewood until 2 p.m., when I had dinner. After dinner another smoke and then turned into the blankets. The snowstorm still continued with some slight intermissions. I cleared the snow away every morning from about my tent. One morning the level of the snow was three feet above the floor of tent. That was the depth that fell during the night. One day I could not light my fire, the snow came down so thick. I gave up the attempt at 1 p.m. I had one small slap-jack about the size of my hand, and it was frozen as hard as a stone. I took it into the blankets with me, thawed it and ate it. The temperature varied from 15 to 23 below zero, and the three top folds of my blankets were frozen together.

On the thirteenth day (the 10th of February) I heard a shout on the opposite side of the river. I went to the bank and there coming across were Frank and an Indian, both with snowshoes. Frank looked very pale and thin. His story was this: He and the Doctor were three days getting down to the mouth of the river, a distance of two miles, and at the end of the third day they were so tired that they just spread their blankets on the snow and turned in without anything to eat. The next morning they made a fire and kept it going for nine days, but got no answer. They put themselves on short rations, but were nearly starved. They had a dog with them, and on the morning of the thirteenth day were going to kill him for food, when Frank heard voices on the beach. He shouted; got an answer; and on going down to the beach found two interior Indians whom Elwyn had sent down with letters. They were twelve days coming from Buck's Bar, and had passed my camp without seeing it. They told Frank that he had made the fire in the wrong place and it could not be seen from the depot. Frank borrowed one of the Indian's snowshoes, and taking the other Indian with him walked up to my camp in two hours. Frank and the Indian stopped with me that night and we had a square meal. Next morning they took a supply of provisions from me and went back to the Doctor.

On the 13th of February they brought a canoe up to my camp and all returned to the depot.

On the 23rd February I started again, and this time took the interior Indians with me. The Doctor would not go with me, so that the party consisted of myself, Frank Bourgeois and the two Indians (Charley and Tom). We arrived at Buck Bar on the 8th of March. During the journey in we were obliged to lay over in camp on account of the wind, it blew so strong down stream that we could not travel against it.

When we passed the great glacier, which is about forty miles from the mouth of the river, we had beautiful calm weather, and the snow had such a crust on it that we could walk without snowshoes.

When we arrived at Buck Bar there was only one

man, named Armstrong, in charge of stores. Armstrong gave me a letter of instruction which Elwyn had left, in case I came up, telling me to take charge of everything. Early in January Elwyn sent Burns with a party in a northerly direction towards the Yukon River, another party under W. McNeil in an easterly direction, and one, under James Schaft, up the first south fork of the Stikine to try and find the point where Burns said he had struck the Naas the year before. Schaft's party consisted of himself, Miller, Rankin, Kotsinta (an Indian), Kosinta's wife and Lucy, an Indian woman (Mrs. Schaft). They travelled very slowly for Schaft was troubled with rheumatism, and by the time they got within twenty miles of the Naas River their provisions were nearly all used up. Schaft then detached Miller and Rankin, giving them four days' provisions, with instructions to go down the Naas River to try and purchase salmon from Indians, telling them that he would not move camp until they returned. Miller and Rankin travelled to the Naas and down the Naas seven days until they had eaten all their provisions and found no Indians. They then turned back, and on the fourth day came to the place where they had left Schaft, but Schaft and his party were gone. Miller had a deer-skin coat, and during those four days he and Rankin eat part of it. In Schaft's camp they found two small dogs belonging to the Indian Kotsinta, the poor little animals were so starved with hunger and cold that they were unable to walk. Miller took one and Rankin the other and followed Schaft's track in the direction of Buck's Bar. They killed the dogs that night and had a supper of dog soup. They travelled on for two days longer and came to the Skoote River, a tributary of the Stikine. Here Rankin got so weak that he was unable to proceed any further. Two days before they had thrown away all their superfluous clothing, retaining only what was necessary to travel in, and in addition Miller carried two blankets and Rankin one. When Miller found that Rankin gave out he took Rankin's single blanket and gave him his double one, so that Rankin might be as comfortable as possible until he (Miller) returned with help, his intention being to follow Schaft's tracks until he caught up with him, get some provisions and return to Rankin. Miller found on leaving Rankin that Schaft had not taken his old track back to Buck's Bar, but had followed a new route. Accordingly, Miller followed the new track. The morning after Miller left him Rankin thought he felt strong enough to travel and started out on Miller's tracks. He had scarcely gone half a mile when he began to stagger and he was obliged to go back to his camp, where he sat down to die.

About two weeks after Schaft left Buck's Bar with his party, Elwyn organized another and taking command of it himself followed Schaft's tracks, and on the very morning that Rankin had sat down to die he had not been more than five minutes there when Elwyn came along by Schaft's old track with plenty of provisions. It was like an interposition of Providence, for if Rankin had been ten minutes later Elwyn would have passed and Rankin must have perished. Elwyn gave him about twenty pounds of provisions and left him. Next day Rankin was able to travel, and in three days caught up with Miller and Schaft.

The day after my arrival at Buck's Bar an Indian brought in the following letter from Miller :

"Mr. Armstrong,—For God's sake send us some provisions. We are starving, and Rankin is twenty-five miles behind, unable to walk.—Miller."

I asked the Indian how many days he was coming from Miller, and he said two. I immediately gave him a light load of provisions, telling him to make all the haste he could back to Miller. I then packed two others heavily and sent Frank Bourgeois with them.

On the 17th of March Miller and Rankin came into Buck's Bar. Schaft was suffering so much from rheumatism that he could not walk, and did not get in for some weeks afterwards,

fire and I remarked that I would like to take a party over to the Naas and try and connect Miller's point with Burns. Elwyn agreed to the proposal, and a party was formed, consisting of myself, Frank Bourgeois, Bonner and three Indians. We left Buck's Bar on the 28th of March, heavily laden with provisions. The only instruments I took with me were a prismatic compass, a small pocket compass, an aneroid barometer and a small thermometer. Our course for the first few days was up the first south fork of the Stikine. After travelling for ten days I found the provisions disappearing so rapidly that I sent F. Bourgeois and two of the Indians back to



"HIS SNOWSHOE HAD DIPPED AND IT WENT DOWN LIKE A KINFE INTO BUTTER."

(From a pen and ink sketch.)

his Indian wife snaring rabbits for him and getting him along on a sleigh by easy stages.

Elwyn and party got in to Buck's Bar on the 20th, having failed to reach the Naas.

Miller had a pocket compass, and had taken bearings and estimated distances, so that I was able to make a rough sketch of his route from Buck's Bar to the Naas River. I also had a sketch of Burns' route from Kispyox to the Naas, and having laid them down on the map I found that the point where Burns struck the Naas was above the point where Miller struck it, but Miller was of opinion that Burns' point was below.

On the 24th Elwyn and I were chatting over the

Buck's Bar with barely sufficient provisions to take them there, and I only allowed them four days to make the journey. They grumbled a little, but finally started, and I knew by the look that Bourgeois gave me when he bid me good-bye that he never expected to see me again. The following day we (myself, Bonner and the Indian Frank) continued our journey, pretty heavily packed. Bonner and the Indian used toboggans, which they dragged along the surface of the snow. I packed mine on my back. The weather was mild and we had a few light showers of rain.

April 8th we travelled over a rough bit of country, and as we were coming down through a gorge in the

mountain the Indian, who was in front, sunk in the snow. His snowshoe had dipped and it went down like a knife into butter, and the wet snow piled in on it and there he was stuck fast. While he was extricating himself I walked a few steps ahead, and down I went, nearly up to my shoulders, and Bonner had to dig me out. While Bonner was trying to get me out he said:

"You had better turn back; we will never get through."

"What has put that into your head?" I asked.

"The season is too far advanced," he said, "and the snow is too soft to travel on."

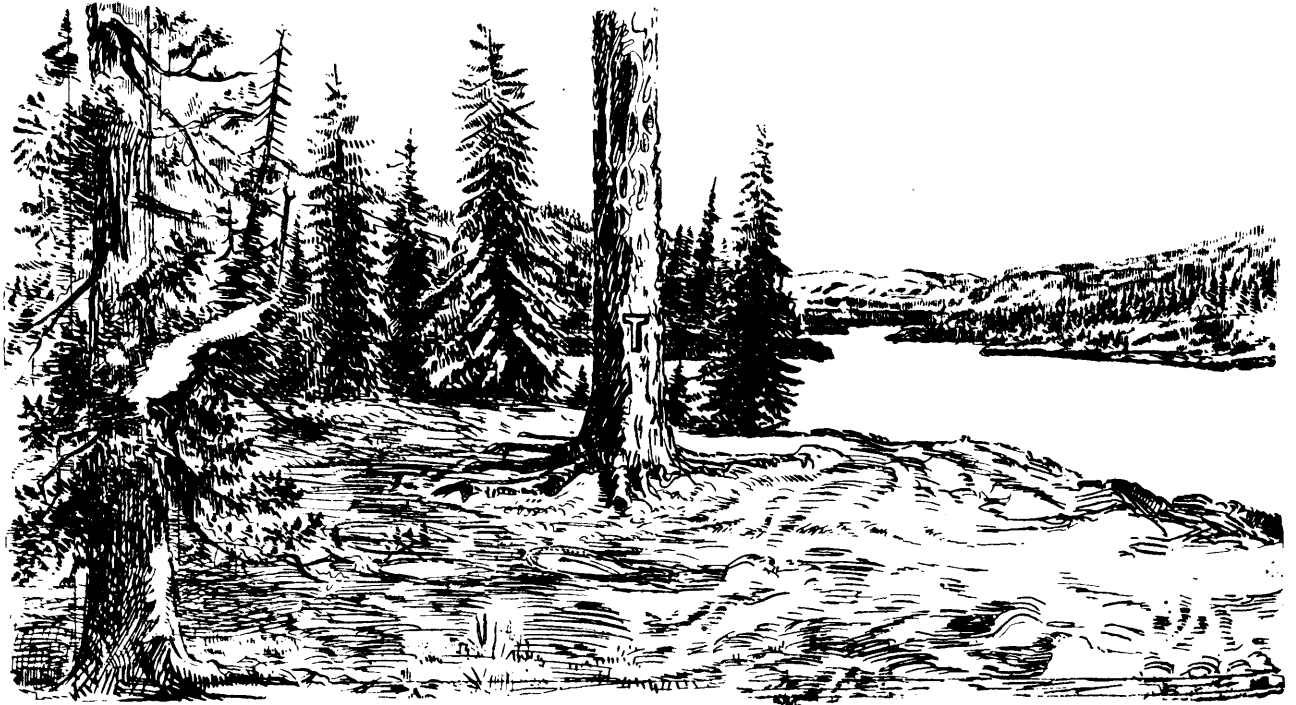
I laughed at him, and he got vexed and said that if it rained that night he would go back if he had to go alone. I then gave him such a tongue-lashing that he never spoke of going back afterwards.

We reached the Naas River at 9 a.m. on the 12th April and found it very much broken up. My barometer indicated an altitude of about 2,500 feet, and as I knew that the highest point on Burns' route was not

was. He said he thought it was about ten days' old. I suspected it was made by McNeill's party, that left Buck's Bar about the same time as Elwyn, but took a different route. The valley of this stream bore northeast, so I resolved on following it up.

At 9 a.m. on the 18th we came to a point where the stream forked, one coming from the E.S.E. and the other from the N.E. At this point we found five toboggans, which Bonner identified as belonging to McNeill's party. We were therefore in high spirits as we were certain we were on McNeill's tracks, but decided on continuing in a N.E. direction, as I did not consider I had gone quite far enough to intersect Burns' line of route, which was a mistake, as I afterwards learned that the point where we found the toboggans was the mouth of the Konigees River (the fork coming from the E.S.E.), and the actual point where Burns said he struck the Naas.

However, we went up the N.E. fork and travelled for four days through a very bad canon, the rocks being perpendicular on each side for over one hundred



"A TREE MARKED WITH THE LETTER 'T'."

more than 2,000 feet, I concluded that I must be above the point where he struck the Naas. I therefore travelled down the river until the morning of the 17th, closely examining every stream that entered on the left bank, but without success. My barometer told me that I was at a lower altitude than any point on Burns' line of route, so that one of two things was certain, either Burns must have never seen the Naas River, or I must have passed his point. In either case I inferred that if I left the river and travelled in a northeasterly direction I must cross his line somewhere, and as I had his sketch with me I would recognize it.

About 10 a.m., same day, we came to a wide stream entering the Naas on the left bank and at the mouth of this stream was a tree marked with the letter T, and there was an old snowshoe track, apparently going up the stream. By this time our provisions were very low and we were on very short rations. I asked Frank how old he thought the track

feet above us and the ice in the stream badly broken up. In some places we had to crawl on our hands and knees along a ledge of ice not much more than a foot in width, and the river boiling below us.

On the 5th day the valley widened and we got into an open country, the hills on each side of the river being low and gentle of ascent. We made ten miles before stopping for breakfast, at 9 a.m. Just then an Indian came in sight, the first we had met since leaving Buck's Bar. He came up to us but we could not speak to him. He neither understood Chinook or Stikine. We made him understand by signs that we wanted to go to Kispyox. That we had come from Stikine; had been a long time on the journey and had very little to eat. We learned from him by the same method that if we would return with him to where he had left his party we would meet a woman who understood the Stikine language. We went back with him, about six miles, and found a party consisting of

three men, four women and eight children camped. They had been hunting in the mountains; had come down that morning, and seeing our tracks had followed us.

One of the women told me that McNeil, instead of coming up from the Naas, had come down the stream that we were then on, and that we were travelling in a contrary direction to his line of route. She also told me that I would have to go down stream about two miles further, then up a small stream on the left bank, which would lead me to a couple of small lakes; that I should cross those lakes, then down a small stream which would take me to Kuldo. I knew that Kuldo was about sixty

would give me and my party all we wanted. I agreed to stop and was ushered into the chief's house, where they had made a capital fire. The fire was in the centre of the house, which was about thirty feet square, and on the side remote from the door there was a new mat spread and a box for me to sit on. I took my seat, and then the whole tribe, which seemed to me to number about 200, squatted on the ground, quite filling the house. A young man then brought me a wooden trough of clean water. He saw that I needed a wash, for I had not washed my face or neck since we left Buck's Bar. I had a good wash and then they picked out the best dried salmon they could find and roasted it for us. They then put on a pot with fresh



"THE FIRST WORDS HE SAID WAS 'NIKA TUM TUM MIKA MEMELOSE.'"

miles above Kispoyox on the Skeena. I then bargained with the Indian who found us to guide me to Kispoyox and feed my party on the way (he had plenty of dried cariboo meat with him) for two blankets and a shirt.

We did not travel any more that day, as the Indian wanted to get some meat which was cached a little distance off.

We started the following day and arrived at Kuldo on the 27th. At 11 a.m. the following day we reached the Kiskukause village, to which our guide belonged, and here all the inhabitants turned out and insisted on my stopping for the day. I told them I wanted to go on to Kispoyox, and that I had nothing to eat. They said that did not matter. They

cariboo meat in it, and as we had some tea left, we felt very comfortable. I can never forget the kindness shown to me by these people, and this is not an isolated case, for wherever I have been amongst Indians, and I have been with many of the coast tribes and some of the interior, I have always been treated kindly by them, and it is my opinion that wherever there has been trouble with Indians it has been the white man's fault in the first instance.

On the morning of the 29th I left the Kiskukause village at 4 a.m. I started thus early because Kispoyox was forty miles distant and I wanted to get there that day if possible. The guide did not start with me. He said I could not miss the trail as it was a good one, but

he would catch up with me before noon. We had a little dried salmon and tea before starting. At 10 a.m. the guide overtook us and told us that if we travelled fast we would reach Kispyox by sunset. Accordingly we agreed not to stop for anything. The guide took my blankets so that I had nothing to carry except the clothes I had on which consisted of some underclothing, a pair of trousers in ribbons from the knees downwards, a thick scarlet overshirt and a coat with hardly any sleeves, all torn travelling through brush. Our order of march was as follows: The guide went first, Bonner next, and I followed Bonner. Frank, the Stikine Indian came last. The trail was for the most part through a thick forest. About 3 p.m. I heard

sight of the red bluff at Kispyox, which I estimated at twelve miles distance. I put the best foot foremost, but at 8 p.m. it got so dark that I could not see the trail, and was obliged to stop. I had matches with me, so I gathered a few sticks together, made a fire and lay down beside it. It commenced to freeze, and I had no blankets. However, I determined to make the best of it. First I would turn one side to the fire and then the other. About 9 o'clock I was beginning to doze when I heard a twig crack. I started up and presently Frank came. I do not know how he found the trail in the dark. The first words he said were "nika tum tum mika memelose" (I thought you would be dead). He told me that Bonner and the guide



"OUR METHOD OF CAMPING IN THE SNOW."

some dogs barking ahead. I suspected they were barking at Bonner and the guide, and probably belonged to some Indians who were camped in the forest. We did not keep close together on the trail, for sometimes I would stop to take a bearing and thus let those in front of me get ahead, and Frank, having blankets to pack, would feel tired and perhaps sit down and rest for awhile, so that when I heard the dogs bark I knew that Bonner and the guide were ahead of me, although the winding of the trail hid them from me. I kept on and the dogs barked at me, but remembering our agreement I did not stop but pushed ahead. I walked very fast and at 5 o'clock began to feel very lonely. I could hear no one in front and no one behind. About six o'clock I came in

camped with the Indians where I heard the dog barking. That Bonner wanted Frank to stop, but he knowing that I had no blankets determined to follow me. We made some tea, had a little dried salmon and then turned in, rolling ourselves up in the half tent and Frank's blankets. We slept until three o'clock, when we turned out, had a little tea and the remainder of the salmon, and started on our journey, arriving at Kispyox at 5 o'clock. Here I found Decker, McCarthy, Big Bill, Cahill, Scovell and two or three others. I was treated to the best they had. Bonner and the guide came in at noon. The telegraph line being in working order I sent an abstract of my report over the wires to New Westminster and received the congratulation of all my friends along the line.

My route from the Stikine to the Kouigus River was: Up the first South Fork to the divide between it and the Skoote, thence down the Skoote to its junction with the Ninqunsau, up the Ninqunsau to the divide between it and the Naas, down the Naas to the Forks, up the N.E. Fork to the mouth of the Kouigus River.

The country through which the first south fork of the Stikine flows is for the most part a bench country inadequately timbered, the ascent to the divide between it and the Skoote is not very heavy.

The Skoote is a narrow valley and tolerably heavy timbered. The Ninqunsau is also narrow but easily travelled, and the divide between it and the waters of the Naas is almost imperceptible. The Naas, from the divide between it and the Ninqunsau down to the forks of the Naas and up the N.E. bank, is also favorable, although pretty heavily timbered throughout.

I cannot say anything as to the nature of the country, as it was heavily covered with snow when I went over it.

the Skeena, and Kispyox was 130 miles from above the mouth, making in all 160 miles. The river was full of floating masses of ice so that it would have been very dangerous to attempt to go down in a canoe. On the advice of Decker I resolved to go by what was called the grease trail, across the mountains to the Hudson's Bay Company's post on the Naas River a distance of about 120 miles and then by canoe to Fort Simpson. Accordingly, after remaining Saturday and Sunday at Kispyox I took Big Bill and Frank, with seven days' provisions and started on Monday morning at 6 o'clock, and the following Saturday at 10 a.m. I reached the head of canoe navigation on the Naas, where I found Muskaboo, a chief of the Naas Indians, trading for furs with a lot of Indians from the interior. Muskaboo asked me where I was going, and when I told him I was going to Mr. Cunningham's at the Hudson's Bay Company's post, he immediately offered me and my party a passage in his canoe, provided I would wait until noon, when he would be finished trading. In the meantime he gave me a couple



"WHEN BURRAGE SAW ME, HE EXCLAIMED 'GOOD GOD, HERE IS LEECH.'"

Our method of camping in the snow was this: We selected a large tree, in front and to the windward of which we would build our fire, but first taking off our snowshoes and excavating a square, large enough for three people, to a depth of about five feet, so that we would have the fire at our feet and three solid walls of snow to right of and left and behind us, then rigged up our half tent to windward to shelter us in case of snow falling. We then spread fir branches on the floor of our camp, our camp-sheet on top of the branches and lastly our blankets, which, all things considered, made a very comfortable camp.

My instructions from Elwyn were if I got to Kispyox to make my way to Fort Simpson on the Tchimpansean peninsula, about thirty miles from the mouth of

of tots of very good rum and some tobacco, which were very acceptable, as we had not had a smoke for a week. We passed two large villages on our way down the river, the first called Kit-la-toms and the second Kit-whim-chis. At the latter I met Mr. Cunningham coming up with goods to trade with the interior Indians. I introduced myself, and Mr. Cunningham told me to go to his house and make myself at home, that he would be back on the following day.

When we got down to the next village, Kit-whit-in, about two miles above the Hudson's Bay Company's post, it was so late I did not like to go down to Cunningham's, afraid of putting Mrs. Cunningham to inconvenience, so I remained in Muskaboo's house all night. Next morning I went down to the Hudson's

Bay Company's post, and was received very kindly by Mrs. Cunningham, who told me that she was very sorry that I had stopped in an Indian house. That I ought to have come down, no matter how late it was.

Cunningham came back at noon. Next day I went up to the Indian village with Cunningham to hire a canoe to take me to Fort Simpson, but did not succeed in getting one. We returned to Mr. Cunningham's house, and just as we came to the landing, who should we see but C. Burrage and Wm. Wall with a large flat-bottomed boat and a boat's crew. They had come from Victoria, a distance of about 600 miles. C. Burrage was quartermaster for our division of the telegraph and Wall was one of our storckeeper, en route to relieve C. Simpson at Wrangel.

The moment Burrage saw me, he exclaimed "Good God, here is Leech! Well you were the last person we expected to see. We had the run of everybody except you. We did not know where you were. We knew that you were out exploring somewhere, but where we could not tell."

That afternoon we embarked in Burrage's boat and proceeded to Stikine. When we were within about one day's journey of Stikine we went ashore to have dinner, and a canoe came in sight, coming from Stikine. We hoisted our flag (The Stars and Stripes), and the canoe came over to us. It contained Elwyn, Morrison, Bourgeois and two others en route to Fort Simpson to hear news of either myself or Conway. After dinner we proceeded in company to Wrangel, where we arrived at 11 a.m. next day.

Burrage had come to pay off all hands and take them to Victoria, and brought us the news that the company had decided on discontinuing the work, as the Atlantic cable was successful. As a few of our men were still at Buck's Bar, Burrage, Elwyn and Bourgeois, with a few Indians, went up the river to pay them off and fetch them down. They got back to Wrangel on the 3rd of June. Burrage settled up with me on the 4th, and he, Elwyn and all hands except myself went in the boat to Fort Simpson.

As the Hudson's Bay Company's steamer *Otter* was expected at Wrangel in about ten days I decided on waiting until she came in preference to going in the boat. The *Otter* arrived on the 9th day and I bid farewell to Wrangel.

A DESCRIPTION OF THE BOSUN MINE.

(By Howard West, A.R.S.M.)

THE Slocan has been aptly termed a poor man's country, in contradistinction to other parts of the province, from the fact that in many instances owing to peculiar natural advantages, it has been possible to defray the preliminary expenses incurred in development from the proceeds of ore obtained almost at the grass roots. Never perhaps has this been so conspicuously exemplified as in the case of the now well-known Bosun mine.

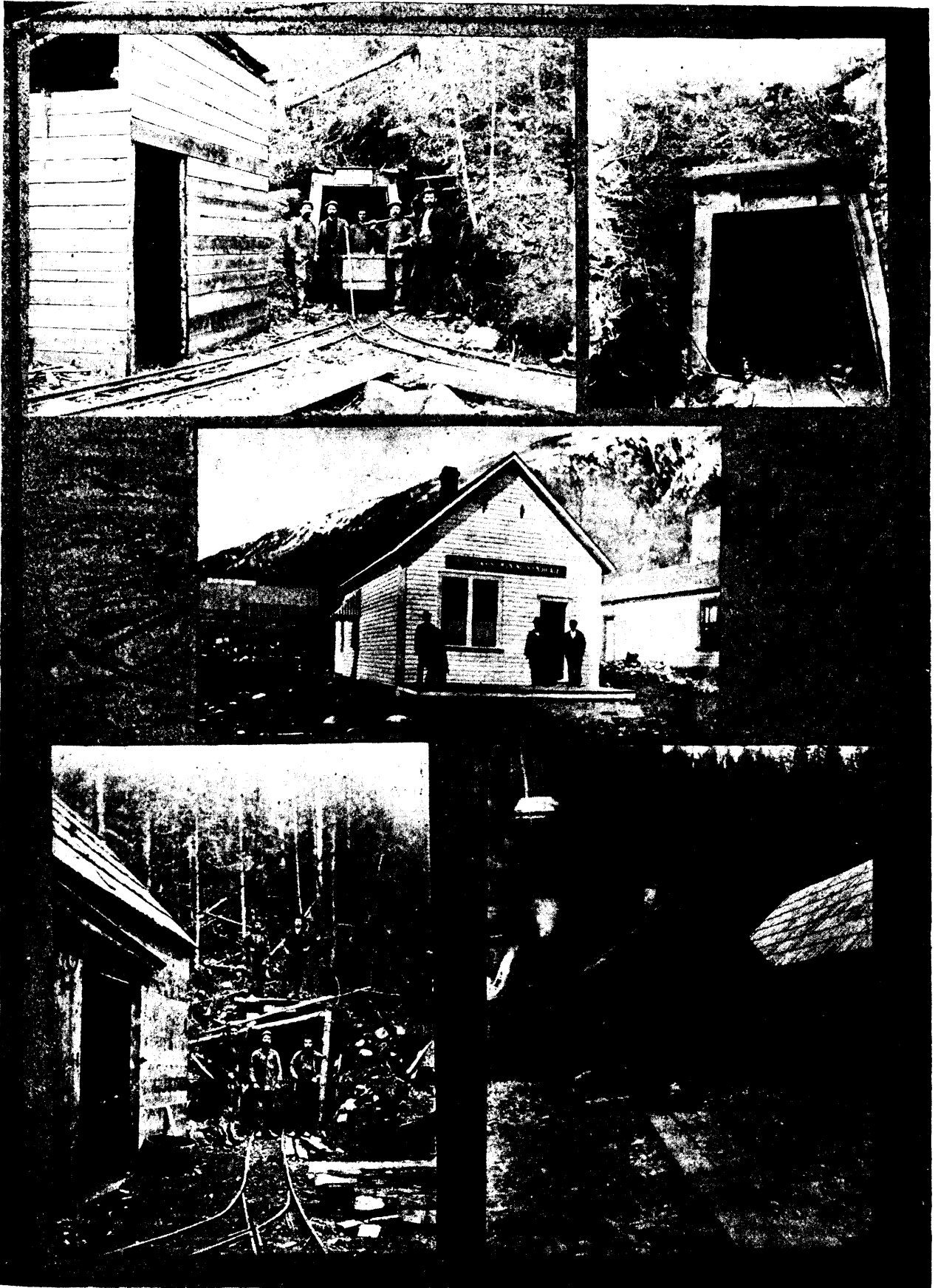
So many unauthentic reports, some of them almost ludicrous in their inaccuracy, have been circulated regarding this property that it is a pleasure to be able to chronicle the true unadorned facts as they really exist.

The history of the Bosun hinges on the accidental delivery in the summer of '97 of a vein of galena on

what was afterwards known as the Fidelity claim. It has been frequently recorded how a prospector returning home one evening was struck by the casual appearance of pieces of galena embedded in the roots of an upturned tree. Investigation led to the finding of the vein from whence these were derived and subsequent staking of the ground, which, by the way, had been located several times previously and abandoned as worthless on account of the heavy superficial covering of gravel and debris, which rendered systematic prospecting out of the question. The physical feature, however, which proved so great an obstacle to the miner, was the condition most favourable to the agriculturist, so it came about that the ground situated below the Fidelity, being well irrigated and close to the lake, was appropriated to the uses of the rancher. This peaceful condition of affairs was, however, destined to be short-lived, for designing persons who had thoroughly mastered the intricacies of the mining law saw capital in the idea of staking off the ground and acquiring the right to sink shafts and run tunnels through the owners' crops, the result being that the Boatswain and Tyro were added to the list of claims in the Slocan mining division.

Such a brilliant piece of stratagem was rewarded by the payment of \$700, although it is somewhat doubtful if they could have substantiated their right to the ground at the time, had it been called in question. Peace at any price, however, appeared to be the motto of the rancher, and so having disposed of likely complications he proceeded with his task of cultivating the soil, a wiser though apparently poorer man. This latter, however, remained to be proved; in the course of time it became necessary in order to retain possession to do the annual assessment as required by law, and having previously made efforts to trace the Fidelity vein on to the Bosun ground, open trenches were dug near the boundary line with a view to its discovery. Fortunately these proved highly successful, or at any rate a vein—whether identical with that originally found or not—carrying galena, was here brought to light, which, although unknown at the time, contained in embryo the possibilities of the Bosun mine as it exists to-day. The uncertainty regarding its ultimate value, and the amount of capital required to effectually prove it, led the owner to accept an offer made by Mr. Sandiford, representing the North West Mining Syndicate. By the terms of this option he agreed to keep two men continuously at work on the property for thirty days, at the expiration of which he had the privilege of either relinquishing all title, paying ten per cent. down on a year's bond at \$15,000, or purchasing at a cash consideration of \$7,500.

Starting some three hundred feet down the hill, away from the Fidelity line, he commenced to sink an experimental shaft in the hope of encountering a continuation of the vein, thereby proving conclusively that it entered and was contained in the Bosun ground. Here again the efforts were crowned with success, for within a few feet of the surface, as soon as the loose ground was traversed, encouraging indications were met with. Something more than indications, however, are required to make a mine, and luckily it was not long before this was forthcoming in the shape of a fine streak of galena. When first discovered this was barely wide enough to measure, it is true, but then big things sometimes have small beginnings, more frequently perhaps in mining than in



(1) TUNNEL NO. 1, BOSUN MINE.

(3) OFFICE OF THE COMPANY, NEW DENVER.

(2) TUNNEL NO. 2, BOSUN MINE.

(4) TUNNEL NO. 3 BOSUN, MINE.

(5) MINER'S BUNK HOUSE AND BLACKSMITH SHOP.

other directions, and this proved to be emphatically the case in the present instance. As the distance from the surface increased, so did the width of the galena in proportion, until at a depth of forty feet, ore was visible for almost the entire width of the shaft. Under the circumstances it is not to be wondered at that Mr. Sandiford accepted the latter alternative in the terms of the agreement, and Mr. Harris, the owner of the ranch, who had been deluded into paying \$700 for two worthless claims, found himself the richer by \$7,500. Truly the fortunes of mining are many and various.

On July 4th active development began under the new company, and though employing only a few men at first, the force has been steadily increased until to-day it numbers over thirty. Within two months of making the payment and three of the commencement of operations, while still in the initial stage of development, shipments were begun, the first car leaving the mine on September 6th, to be followed by five others the same month, making a total of 120 tons for September, or a value of considerably more than the original cost of the property. From that time to this there has been no diminution in the producing capacity of the mine, the output being consistently maintained in the neighbourhood of a hundred tons a month. In all, nine hundred tons have been shipped to date, having a nett value of over \$60,000, a record I venture to assert unprecedented in the history of mining in the Slocan and in all probability of the whole province.

The ore, which is of the ordinary Slocan variety, associated more or less with argentiferous zinc blende, occurs in a well-defined vein cutting the enclosing argillites at a somewhat oblique angle, having a general trend N.E. by S.W. and dipping approximately fifty-five degrees in a southwesterly direction. As an example of true fissuring, I question if it is surpassed in the district, every feature distinctive of this mode of origin being conspicuously displayed. Subsequent movements have caused certain irregularities, parts of the vein being tortuous and winding as shown on the plans, but the original method of deposition is none the less obvious on that account, the uniform persistency of the vein being demonstrated afresh in every working. The real width of the deposit is not readily attainable, but in places where both walls are clearly defined it is seen to be from four to six feet. At such portions two parallel and highly polished surfaces indicate the extent of the mineral bearing ground, the solid galena often reaching the full width of the cavity. The presence of a layer of clayey matter, or what is commonly known as gouge, and the many striations on both walls, prove undeniably the movement that must have taken place. Sufficient work has hardly been accomplished to give a clear conception of the precise nature of the deposit, no means having yet been discovered of ascertaining just when and where valuable mineral is likely to be encountered. It is the general opinion, shared by those in authority, that the ore runs in chutes which dip in an easterly direction extending from one level to another, but in the absence of corroborative evidence in the tunnels themselves, judgment had best be deferred until this is forthcoming. The Slocan deposits are proverbially erratic, and there are many who assert that the only safe way is to stope out every inch of ground within the vein, this method being observed in practice at the Payne and other large mines. However, that may be, the indications at the Bosun certainly point to the correctness of the

former theory, and the results of development in the lower tunnels will be awaited with interest. The gangue is similar to that found in most other veins, consisting of quartz, lime, spathic iron and a large amount of brecciated country where the rock has been badly crushed or much fractured.

The original method of attacking the vein by means of a shaft, rendering it imperative to hoist all the ore and waste a considerable distance was merely a temporary expedient to obtain as much information as possible in the time at command; as soon as convenient therefore steps were taken to investigate the chute from below, thereby lessening transportation charges and facilitating the draining of the workings. The No. 1 tunnel, some 75 feet vertically below the top of the shaft was started on September 15th last and is now in a distance of 331 feet, having made connection with the shaft about 200 feet from the entrance. The No. 2, 75 feet again below this, was started a little earlier, in July, and has been extended until at the present time its length is in the neighbourhood of 450 feet. Both tunnels have been driven continuously on the vein, and a third has recently been started 150 feet farther down. On account of the great depth of gravel at this point—proved by an experimental shaft to be considerably in excess of 100 feet—this tunnel although driven for a distance of 140 feet is still encountering gravel and boulders, but is expected to meet with solid rock at almost any moment, when cross-cutting will be resorted to in order to locate the vein. This will provide 150 feet of stoping ground to the tunnel above, there being equal scope below before the level of the lake is reached. So far very little stoping has been found necessary to ensure the regular shipments, sufficient ore having been taken out in the course of development. The two upper levels are connected by raises, the ore from above being sent down chutes where it can be concentrated in one spot and thus handled more expeditiously.

The company, quick to recognize the importance and economy of including as many surrounding claims as possible in their group, have been gradually acquiring those situated most advantageously for their purpose, and now number the following among their holdings: The Boatswain Fraction, Tyro, Tyro Fraction, Fidelity Fraction, Broken Lock, Lake View, Lake View Fraction, Alpha and Alpha Fraction. But little development has been attempted on the majority of these, although there is some 500 feet of tunnelling on the Lake View, which shows a very promising ledge over 30 feet in width. As soon as ever the snow goes, however, it is the intention of the management to thoroughly exploit the whole of this ground.

The presence of a somewhat excessive amount of zinc in the ore, which apparently has been a source of some anxiety, increased as depth was gained, but the company's directors, who are among the shrewdest business men in the City of London, have taken the bull by the horns, and grappled with the difficulty before it has had time to assume serious dimensions. As a result, a shipment of practically pure blende, assaying approximately 50 per cent zinc, being almost free from lead, is now on its way to London, where the most profitable method of treatment will be thoroughly investigated. A successful outcome will benefit not only the shareholders in the Bosun, but give a stimulus to the whole district, which I need hardly say will be gladly welcomed and duly appreciated.

This article would be incomplete without a re-

ference to the unique position in which the North West Mining Syndicate and its shareholders stand when compared with other companies similarly situated. Soon after the first annual meeting the directors were able to announce with pardonable pride the declaration of a 20 per cent. dividend as a result practically of the first year's operations. This encouraging condition of affairs was due to several causes, a brief analysis of which might serve as an object lesson to our companies who have made a failure and then attributed it to the country. To attempt to eliminate the element of chance would be to deprive mining of a good deal of its attractiveness from the investor's standpoint, but to proceed always along the most careful business lines is the first and obvious duty of all interested in this important phase of the industry; and this is what a good many—in fact I think we may safely say the majority of directors—do not. To begin with, the company under consideration has an experienced London board, composed not merely of thorough business men, but those who have had to deal with mining ventures in other parts of the world, and therefore know precisely what they are about in this instance. Secondly, and of quite equal importance, is the fact that they are not burdened with a capital so vast as to be entirely unmanageable and out of all proportion to the scale of their operations. The third factor which contributed to their success is the unlimited confidence which they reposed in their local representative, Mr. W. H. Sandiford, who had full power to act for the company in any emergency which might arise. To his foresight and judgment, acquired during some twenty-five years' varied experience in every quarter of the globe, they owe a large measure of praise, and if there is one gratifying feature about the whole connection, it is to know that his services to the company have been fully recognized by the directors and substantially acknowledged; a most excellent precedent for other companies who wish to achieve like success. It might not be out of place to refer to one other little matter while we are on the subject, namely, that the office of the company, a photograph of which is here reproduced, is located in New Denver within a short distance of the mine itself. No huge staff of officials find employment in upholding the dignity of the company, nor is a pretentious stone building in which to conduct its business considered a necessity, yet I venture to say that if any detailed information about the mine is required, it can be furnished as soon, if not sooner than in many of the larger offices where a dozen men lounge about and nobody knows just where his department ends and his neighbour's begins. This concern, too, differs from nearly all others here, in that the mine being situated within two miles of New Denver and less than three hundred feet above the town in elevation, no boarding house is kept by the company; the men thus enjoy the privilege of living where they like, and come to town as often as they choose. For a like reason no Sunday work is permitted at the mine, mutual satisfaction having been arrived at where friction might have been expected.

The advantages of these arrangements where practicable are too well understood to need commenting upon, the consequence being that the better class of men and miners are always obtainable.

What this company has done and is still doing for the vicinity may be judged from a glance at the monthly pay-roll, which shows an expenditure of

over three thousand dollars, a consideration which must add materially to the welfare and prosperity of any town fortunate enough to command it.

In conclusion, I feel that I have been able to contribute no more than a few passing remarks to a description which might be continued indefinitely and made to embrace detailed observations, scientific and otherwise, of more or less interest to all, but the Editor's decree is inexorable and space will not permit, so wishing the company every success in their future operations and a continuation of the good relationship which has always existed between the management and the employees, we bid adieu to what we earnestly hope will ere long be classed among the foremost of the mines of the Slocan.

THE MONTH'S MINING.

ATLIN.

(From a Correspondent.)

Some promising quartz ledges have been found of late in this district; one in particular, a galena prospect, which is said to assay \$150. Meanwhile a great many mineral claims are being staked; the showing of which is good, but of a low grade, similar to the Treadwell of Juneau. A large majority have big leads and are said to be abundant in ore.

The placer mining is considered a failure, as there is only a limited number of claims working on wages paid by their owner, while the rest are so tied up by the action of incompetent officials, that when a man walks through the town he is simply disgusted at the way things are being mismanaged. Large groups of men are to be seen on the streets at any hour of the day, trying to find out something, and hoping the season will be laid over until June 1900.

I will say a few words concerning hydraulic mining here. There are numbers of bench claims which are far too deep to be worked by the old-fashioned rocker, which will in time, no doubt, be worked out by hydraulic methods; but a present the bed-rock is so deep, and the golden dust so scattered, that it will not pay private individuals to expend time, money and labour on such propositions.

KAMLOOPS.

(From Our Own Correspondent.)

During the past month work has been resumed on the Cinnabar properties at Savona. Messrs. Colquhoun and Monckton have the management for the time being. These gentlemen have recently been developing their copper claims near Copper Creek with promising results. A well mineralized ore body has been followed in the workings. Assays vary from a trace to \$3 to \$4 in gold and up to 15 per cent. copper, the average being about 6 per cent.

The Python people are perfecting their arrangements for rapid development, and hereafter regular shipments will be made from the property. The tramway from the shaft to the ore line is nearly finished.

On the Pothook sinking continues simultaneously with work at the 150 and 250-foot levels. The cross-cut at the 150-foot level is in 260 feet, cutting an 18-foot vein, carrying from 4 to 6 per cent. copper; thence drifting has been done for sixty feet, at which point the vein has been again cross-cut, this time with even better results. The vein stuff carries more copper by 1 to 2 per cent. and is wider. This company intends at once replacing their 8-horse power gasoline hoist by a 50-horse power hoisting plant. It is also their intention to put in at an early date an air compressor and five drills. The Copper King tunnel is being continued, but so far the ledge on which the 40-foot shaft is sunk has not been tapped.

A number of claim-owners are doing assessment work and prospectors are giving much attention to the Shuswap Lake country. The map of Coal Hill, which is being prepared by Mr. Wood, C.E., is nearing completion and will soon be ready for the lithographers.

REVELSTOKE.

(From Our Own Correspondent.)

Owing to an unusually backward spring all over the country, prospecting and mining development have been very much retarded this year; but for all that the indomitable

prospector and sanguine claim-owner have by no means been idle. Once a little way underground and the enormous snowfall of Kootenay readily becomes a help rather than a hindrance, as large quantities of ore and heavy weights of other materials can be cheaply and easily handled over the snow that could hardly be moved on the road. But of course all prospecting is necessarily stopped till the ground is clear.

Situated as Revelstoke is, on a very extensive flat, which is densely covered with many varieties of trees (all young, the flat has been so often burnt over) at the intersection of the C.P.R. main line with the Columbia River for the last time going west, the city has become a natural centre for miners and mining news from the surrounding camps of Illecillewaet, the Lardeau and Trout Lake district, and the Big Bend, the latter so justly celebrated for its placer diggings in 1864, and to a greater or less extent since. The Big Bend district indeed may be said to have Revelstoke as its base of supplies, as all materials for the mining properties than must be supplied from that town, hence Big Bend shall be first to receive our attention. Not much occurs before reaching Carne's Creek, some thirty miles up the Columbia, but there and close by there are still some placer diggings, though the value of them is probably less than that of vast bodies of arsenical pyrites now being worked by the Carne's Creek Gold Mining Company, which ore carries high values in gold, and can be treated by the cyanide process at any rate in part. This property is believed with the utmost probability to be a most valuable asset, the quantity known being so large and the value so high. Next in importance comes Downie Creek, some fifty miles from Revelstoke, and Keystone Mountain, on which some wonderfully fine copper ore has been discovered during the last two or three years. One group of claims in the "Standard Basin," is now attracting great attention on account of the marvellous prospectus issued in connection with the floating of the company, but apart from any flowers of speech, there is no doubt a fine showing of copper ore on the property. There are other groups of claims also close by, showing such good surface indications that great hopes are raised of their future value.

Still higher up the river, we come to Goldstream, into which flow French, McCullough and other creeks, all of which are gold-bearing, and upon all of which work has been carried on intermittently for years, with much success, in the case of French Creek, at least. What may eventually be found on following the Columbia further north to Cauve River is of course unknown yet; there is good agricultural land at any rate, and it is more than probable that gold will be found as well as copper and lead.

From the Illecillewaet, good reports are to hand of the Tangier mines, associated with the well-advertised Waverley, and it is quite possible that the owners have really a mine there; the working so far being much too limited to settle the question. The Lanark is also expected to re-open before long, and other first-rate properties being known in the neighbourhood, the "deserted village" may yet "blossom like a rose." Villages are capable of anything in this country! But for the rich claims, surely the Lardeau and Trout Lake district stand foremost, and many of the wonderfully rich veins are by no means small ones either. The Silver Cup is perhaps the best known for high silver values, but many others are running it close, such as the Beatrice, Nettie L., some of the Great Northern and Abbott groups, with more too numerous to mention.

This district has long suffered from want of sufficient transportation facilities, but now with the promised advent of the C.P.R. up to the head of Trout Lake, and probably the Great Northern Railway as well, Lardeau should certainly do well in the immediate future.

One point to be remembered in connection with the idea of running a smelter in this vicinity—a very probable event—is that limestone can be had in any quantities for fluxing purposes, and also iron oxide, or iron pyrites if the metallurgist requires any. Many of the mines that are now ready to ship ore, have such high values in silver, frequently also in gold, that even with the duty on lead bullion as at present, very substantial profits should be realized by smelting in the neighborhood.

Meanwhile, Revelstoke is wondering how the new Copper Company that intends to work the "Standard Basin" properties will pan out, because if the expert who is now examining the ground can induce capital to risk an investment, it may end in the establishment once more of a smelter in Revelstoke, which it is to be hoped will not "follow in the footsteps" of the old one, now vanished. —A. H. H.

FAIRVIEW.

(From Our Own Correspondent.)

During the past month the three companies operating in Fairview have been steadily developing their property and in every case with the most gratifying results.

The Fairview Corporation having recently added to the number of their Burleigh drills, are vigorously pushing the development of the main and north ledges in the Stewwinder, showing up the ore body to be of vast size and apparently of uniform value. The president, Mr. R. Russell, is meeting with great success in placing the treasury stock of the corporation with well known business men of Montreal and other Eastern cities.

The Dominion Consolidated Mines, Ltd., are working a ledge running through three claims, which are an extension of the Stewwinder. Their work at present consists of stripping the vein in various places to prove its extent, but very shortly they intend to sink on the ledge and continue to develop until the mine is so blocked out as to be capable of supplying a very large stamp mill. Until development has proceeded so far the director have no intention of erecting a mill. The stock of this company is finding a ready market in Eastern Canada.

The Smuggler Company is still taking ore out of the Admiral Dewey claim preparatory to a test mill run. The engineer, Mr. Campbell, reports very favourably on the appearance of the property. The Oro Fino mill is busy crushing ore and will shortly send out its first product of gold.

Keremeos is experiencing a decided run of prosperity. Many claims have been bought and bonded in that camp and several contracts have been let for work.

WATERLOO.

(From a Correspondent.)

On the St. Helier group of three claims at Waterloo, above Champion Creek, one of the C.P.R. wood camps near Trail on the Columbia River, some fine free milling quartz has been struck and twelve recent assays taken after stripping the ledge in several places averaged \$96.95 to the ton. The vein is probably the same as that of the Maud S. group, which is a very promising Crown granted property consisting of four claims. Picked samples show free gold plainly visible on all these properties.

H. Landis is working some of his claims, which show a fine ledge of galena running high in values.

Several new locations have been made lately and considerable attention is being given to this camp, which should look up well in the near future.

About 60 feet of shafting was done on the Bryan claim during the winter. From this claim three tons were shipped as a sample of sorted ore and returned \$116 to the ton at the Trail smelter. This property shows up well in the shaft.

BOUNDARY CREEK.

(From Our Own Correspondent.)

Deadwood Camp.—The special contribution on the Mother Lode, referred to last month, having been sent to the RECORD, it will be superfluous for the writer of these notes this month to do more than make brief mention of this, the leading property of the camp. A third steam hoist—there are already on the mine the large hoist at the mouth of the main working shaft, and a small one at the 200-foot level station—has been purchased for use in sinking the winze in the old cross-cut tunnel so as to connect, at about 200 feet incline depth below the present bottom of the winze, with the drift from the 200-foot level from the new shaft. This connection will open up ready for stoping a big body of ore between the old and new workings. It will also give ventilation, which is now much needed in the lower level. The winze will connect with the 200-foot new level at about 500 feet from the main shaft. It may be explained that the collar of the main shaft is almost on a level with the bottom of the 100-foot winze sunk from the old tunnel, so that the main drift in the new workings is measured on the incline, nearly 300 feet deeper than the old cross-cut tunnel. The hoist lately ordered is only a small one—a Jenckes Machine Company's "Special" hoisting engine, having a 5x5 cylinder, which is particularly useful for prospecting and "inside working" of mines. Two machine drills will be used in deepening the winze, and power for drilling and hoisting will be obtained from the compressor already in use on the mine. The addition of these two drills will increase the number of machine drills on the mine to five.

The Buckhorn Gold & Copper Co., Ltd., of which Mr. F. P. Buck, manufacturer, of Quebec, is president, now owns the Buckhorn and Tintic, two adjoining Deadwood Camp claims, upon which, prior to the company acquiring them, about \$2,000 worth of surface work—open cuts, pits and shallow shafts

had been done. There is a very large outcrop on the Buckhorn, which has one of the biggest showings of copper-gold ore in the camp. The ore is copper pyrites, all carrying some gold and some of it yielding some excellent gold values. The claims have been paid for and the company is now settling down to work. A road in to the Buckhorn is being made, cabins being erected and a start has been made to sink a shaft. With a big showing of ore and energetic development, more should soon be heard of the Buckhorn.

The acquirement of the Sunset group by the newly organised Montreal-Boundary Creek Mining Co. was mentioned last month. Since then one of the directors, Mr. W. L. Hogg, who has been largely interested in the Sunset for about two years, has paid the district another visit. Mr. J. H. Macfarlane will now surrender charge of the mining work on the claims to Mr. Henry Johns, formerly foreman on the adjoining Mother Lode property. In the capacity of business manager, Mr. Macfarlane will continue his connection with the owners of the Sunset group. The statement was made, in the published prospectus of the Montreal-Boundary Creek Mining Company, relative to the C.O.D. and Crown Silver claims, that it has been "clearly demonstrated that these properties contain large bodies of rich paying ore," also that on the Sunset, which was referred to as a "rich property," "at a depth of 100 feet a body of ore 70 feet wide was pierced, and subsequent development has shown that the body is continuous." With ample money in the treasury for development purposes, a power plant of adequate capacity ordered and a practical man of known experience and ability to direct development, this company should not have any difficulty in proving ere long that the statements here quoted were well warranted.

No particulars of progress on the Morrison, also in Deadwood camp, are just now available to the writer, who has simply heard that development is being continued with satisfactory results. It is reported that a good strike has lately been made on the Gold Bug, which adjoins the Boundary Creek Mining & Milling Company's claims in North Deadwood, but of this nothing definite has yet been ascertained.

Copper Camp.—Disappointment is again the experience of several who have pinned their faith to this camp, there being at present little of importance in progress. Mr. Brelich, who had several claims under a working bond, has stopped work and operations have been temporarily suspended on the King Solomon, upon which Mr. D. C. Corbin and his associates a few months ago placed a steam plant. There is a little work in hand on the Copper King, but beyond the necessary assessment work Copper Camp is not just now receiving much attention.

Greenwood Camp.—Steady progress with development work is the report for the past month from the Old Ironsides and Knob Hill, respectively. Mining operations on a larger scale than heretofore carried on may be looked for on the Stemwinder, Brooklyn and other claims to be turned over to the big company Messrs. Mackenzie, Mann & Co. are launching. The power plant for the Snow-Shoe has at length reached this property and the manager, Mr. Murray, expects to soon have things moving here. It is stated that a plant will shortly be placed on the Gold Drop, a neighbouring claim to the Snow-Shoe. Among the Eastern men named as being interested in the Gold Drop are Messrs. Chas. R. Hosmer and C. Peterson (both prominent C.P.R. officials), Dr. Brainerd, of the Hamilton Powder Company, and Mr. Dwight Brainerd. Another Greenwood Camp claim, of which much is expected, is the War Eagle, owned by the Greenwood, War Eagle Copper-Gold Mining Company, of Sherbrooke, Quebec, of which Mr. J. P. Buck is president, and Mr. Peter Joyce, formerly of the Centre Star, Rossland, is superintendent. This company now has about 15 men on the pay roll and things are being got into shape for continuous development.

Skylark Camp.—At the Last Chance, upon which work was resumed a few weeks ago, the object of the present operations is to open up the vein at a lower level than was done in the old incline shaft. On the Crescent, like the Last Chance, owned by a Spokane Company, a working shaft is being sunk. At 30 feet in depth this shaft is in ore with a high-grade streak running through it. Another Spokane organisation is developing the Silver King, under the supervision of Mr. John Douglas, of Midway. Although situate near the Skylark, in which silver predominates, there are indications that the Silver King will develop into a good copper property. At 30 feet in depth some nice ore mineralised chiefly with iron, but with some copper and occasionally galena and zinc shavings, came in, and later the copper values improved somewhat.

Wellington Camp.—There is nothing new just now to report about the Golden Crown. By the time this appears in print the main shaft, already down 220 feet, should have been deepened to 250 feet. Drifting is also in hand for the purpose of making

a connection with other workings to secure better ventilation. The latest report from the Winnipeg states that a strike of four to six feet of solid ore has been made in the east drift at the 300-foot level. A stringer followed in about 90 feet, widened to over a foot and upon working back and varying a little the direction of the drift the strike above mentioned was made. The west drift is now within 120 feet of the boundary line between the Winnipeg and the Golden Crown. It is probable that the Golden Crown will connect with this drift and so ensure a good air supply at this level for both properties. A new company, to be called the Calumet and Hecla Consolidated, with a nominal capital of \$200,000, is projected to acquire several claims and fractions which are stated to be adjoining or lying in close proximity to the Winnipeg. These claims are shown in such positions that should the Winnipeg leads continue beyond the limits of that claim they will also occur on one or other of the Calumet and Hecla group. Nothing but actual work, and plenty of it, will, however, prove whether or not they do.

Other Camps.—The City of Paris, in Central Camp, is reported to be improving so satisfactorily that an application made by the owners to the C.P.R. Co. for the early construction of a branch railway line, will probably be acceded to, upon the merits of the property. Both the Oro, Denero and the B.C. in Summit Camp, have continued steadily working, and the former has lately put in a power plant. The Jewel, in Long Lake Camp, is understood to have reduced its working force, but it is stated that a larger company may soon be organised to develop the property still more extensively. The owners of this claim seem to have been gradually extending their holdings until they have secured all available fractions in the vicinity. There is nothing doing just now in Smith's Camp, and not much in either Graham's Camp or Providence Camp. Kimberly Camp is receiving intermittent attention from several prospectors who still think it will turn out well. Among the claims that are said to be well worth opening up are the Atlantic, owned by Messrs. Geo. Henderson and R. Murray, who at 20 feet in depth have met with some nice copper ore carrying gold, and the Yukon, on which at 23 feet, Mr. J. S. Shearer finds his prospect shaft in six feet of ore with the lead widening out as it goes down.

For the Paris Exhibition.—As a result of the recent visit to Boundary Creek of Mr. W. F. Robertson, Provincial mineralogist, a local committee is arranging to collect a representative collection of the ores of the district for the Paris Exhibition. It has been decided to endeavour to obtain suitable specimens from the best developed claims in the mining camps in the district.

PERCY VERENS.

Midway, B.C.

ROSSLAND.

(From Our Own Correspondent.)

The midsummer heat like the cold and the snows of mid-winter have a considerable influence on the activities of the Rossland mines. The weather has been hot to a degree bordering on the extreme, yet, while it has been inconveniently hot for work it has not been too warm for a picnic under the auspices of the Miners' Union, and the civic rulers of Rossland who made the occasion last Monday, a civic holiday, making, I am informed, two civic holidays this year already. I believe that there were some objections made to this civic *dies non*, but the objections disappeared in consideration of the hot weather, and the fact that there is no statutory reason why a civic holiday and a miners' picnic should not go hand in hand. The great majority of the people prefer a little recreation, if stewing in the sun can be so called, to the monotonous repetition of the dull routine of labour. Meanwhile, it must be confessed that mining matters are fully in sympathy with the overpowering heat, which is neither favourable to activity, nor to exertion, mental or physical.

Some of the plans which had been prepared with great care by those who consider themselves fully competent to steer the mining industry have miscarried here as well as in London, and although many explanations are proffered, it does not take much experience to see where the mistakes have been made. Those that believe they can run great business enterprises with a wave of the hand, interlarded with very stale oratory, must be reckoning without their host. The only form of wind that can be said to have conduced to the welfare of the mining industry is compressed air. This, however, is under such complete control and managed with such scientific skill that it may safely be regarded as one of the necessary factors which has come to stay, and like electrical application the industry cannot do without it.

Long familiarity with some of the operations here justify me in saying that the mining critic in Rossland must have a large stock of both patience and good nature. He must not be too rash, or fall into the error of giving the superlative to everything that he speaks or writes about. One cannot tell what is going to happen. The pessimist makes as many mistakes as the optimist. If one aims at a "golden" medium it is perhaps not only a safer but a more reasonable policy. I have seen Rossland and its mines grow from a mere nothing to the present dimensions, and the city and the mines are still increasing in importance, but of course, I have always preferred to see the natural rather than the artificial growth. I concur with those who think that it takes substance to make a shadow, that truth is preferable to fiction, that any great industry must be directed by a high order of intelligence, if that industry is to succeed. Short cuts to wealth are everywhere sought after, but, alas, too often they partake of the nature of the "Will-o'-the-Wisps." One must be relegated as a back number if he enters into the question of production—production, sir, wrote Carlyle in the "Tailor Mended," is the only recourse left. Just think what would be the wind up if production ceased. I want some of the captains of industry here never to lose sight of Carlyle's advice: Produce! Produce! Sir. This man wants more ore, sir, said the car man to the mucker. The man in London is looking across the ocean with his telescope trying to discern in the sky the letters which make up the cabalistic word which has such an important effect on the money changers, and yet production is not marking time either; it is advancing, not perhaps with giant strides, but advancing it is. I find that the ore out-turn from January of this year to July 20 approximates 72,500 tons. Of this the Le Roi has contributed about 45,000 tons, the War Eagle more than half of this, 23,200, the Centre Star about 2,700 tons, the Iron Mask about 1,400 tons, and the balance by occasional shippers. These figures are approximate only, but are near enough for general purposes.

There are questions of gold values as regards these ores coming up in the near future. While ore production is increasing gold values are decreasing, silver is holding its own, while copper is making a great increase. The Trail Creek division suffers from the limited number of its mines which are actual producers. It would be interesting to know what the management of some of these non-producing mines are doing. I could name a half a dozen which really started with a good showing of ore at the surface, and after machinery had been installed the ground was merely gophered at a shallow depth, and now there is not shipping ore enough on the dump to fill a car. The mining engineer who is responsible for this backwardness should be replaced by more up to date management. In a few cases the most ceaseless efforts have been made in barren ledges where there never was a showing of ore to begin with, and inexperience has given a black eye here and there, a fact which is provoking when there have really been good prospects to begin with. According to my own investigations, there ought to be at the present time ten shipping mines in Trail Creek division instead of four. The public is promised some changes soon. But patience is ceasing to be a virtue in this matter. The persistent recurrence of these reports of new shippers comes with painful suggestions, and it is surely about time that some of these reports materialized. Now, the value of these 72,500 tons of ore is a question on which there is a great difference of opinion. I think if it be placed at \$18.00 it may be near the mark. At these figures the total valuation would be \$1,305,000. Recent data do not even confirm these figures, but these latter data apply only to recent production and therefore cannot be applied to the entire tonnage since January 1.

Ore shipments.—The Le Roi has not increased its facilities for shipments; owing to interruptions due to various causes, its shipments vary. When everything is going aright it turns out from eight to ten cars daily. The average for the twenty-nine weeks is a little upwards of 1,550 tons weekly, that of the War Eagle is about 790 tons. The remaining shipments are comparatively too small to make an average.

According to E. J. Balfour, who is in charge of the new hoist, the combined shipments of the War Eagle and Centre Star daily will soon amount to 500 tons. The new hoist is now running smoothly under Mr. Balfour's management.

The Iron Mask.—The fourth of the producers continues making small shipments, which, since January 1st of the present year, have averaged about forty-eight tons weekly.

Iron Horse.—Operations under Mr. George Pfunder, the superintendent, have been suspended. There was nothing in sight in the old workings, except barren ledges.

Great Western.—The management is blasting a foundation for the new shaft-house.

Monte Cristo.—The air compressor is supplying the Virginia. The workings of the latter continue in barren rock.

Evening Star.—This is the only property on Red Mountain which is showing any fair encouragement. Mr. Roy H. Clarke, the mining engineer in charge, reports a large quantity of good ore in the upper and lower workings. Small quantities of ore are being shipped to the Trail smelter.

Nickel Plate.—While sinking below the 200-foot level a small shoot of pay ore was cut about forty feet below the 200-foot level station.

Iron Mask.—About sixty men are at work, and operations are being pushed with much energy. Samuel Hall is superintendent.

White Bear.—Sinking continues, and the 300-foot level will be reached in a few days.

Deer Park.—The "underground farming" on this property has ceased, and the men paid off. This ought to be satisfactory to the shareholders.

Homestake.—Some one is industriously circulating reports of one or two rich ore shoots having recently been cut on this property. The manager has failed to confirm these reports.

Lily May.—The management is drifting on the 250-foot level instead of sinking.

St. Elmo.—Work has been resumed on this Red Mountain property.

Green Mountain.—The shaft is said to be down 175 feet on this Green Mountain property.

I.X.I.—Ten men are at work on this Spokane Mountain property.

Gertrude.—The shaft is down 200 feet. The north drift is in twenty feet and the south drift twenty-five feet.

Velvet.—This property is on Sophia Mountain. It was in 1897 purchased by the New Gold Fields of British Columbia, of which Sir Charles Tupper is president. Development work has been carried on continuously, and about 250 tons of ore were shipped in January, 1898, the smelter returns showing \$20.00 per ton. In June, 1898, a separate company was formed in London, England, for the purpose of developing the Velvet, the capital being £100,000. The work so far done on this property is of a prospective character, viz., sinking, driving, etc. The shaft is down 250 feet, and the vein at that level and also at the 100 and 160 foot level looks very promising. The plant comprises one 60-horse power boiler, one 25 horse power boiler, one 25 horse power winding engine, two machine drills worked by steam at present, one circular saw for cutting rough lumber, also an assay plant. A 20-drill air compressor will be installed shortly, also electric lighting and telephone. In all probability a wagon road will be constructed from Rossland to Sophie Mountain before next winter. The New Gold Fields of B.C., Ltd., the parent company, retains a large interest in the Velvet mines, and other properties, the Portland especially, an adjoining property on the southeast, and it is believed that this Velvet vein runs through the Portland. The head office of the New Gold Fields of B.C., are at 23 Leaden-hall street, London, E.C. Mr. W. H. Shearns is secretary of the different companies, Mr. Morrish, M.I.M., London, is the consulting engineer, and Mr. John L. Morrish, M.E., is the managing engineer in charge. The Velvet and the Portland will soon be regular shippers.

Mascot.—The property is being developed by two tunnels, and a winze. Tunnel No. 2 is in a little more than 750 feet, and is on ore most of the distance. The winze on this tunnel is down 200 feet. Tunnel No. 3 is in about 730 feet. The recent workings have been cross-cut at the 500-foot level to connect with a winze. No. 2, or north ledge, is developed by three shafts, the total depth of which is a little more than 150 feet, and all is on good-looking quartz. The compressor is a 7-drill Ingersoll sergeant, driven by electric power, furnished by the West Kootenay Power and Light Company. Nearly all of this company's shares are floated down east, principally in Montreal. The capital stock is divided into 3,500,000 shares of the par value of \$1.00 each. The property is located on Columbia and Kootenay Mountain. The ore is gold copper. Mr. C. E. Galt, of Montreal, is secretary, and Mr. Jay P. Groves, of Spokane, is manager.

Referendum Free Gold Mining and Milling Co.—The capital stock of this company is divided into 2,000,000

shares of 25 cents each. The liability is not personal and 800,000 shares have been set aside as Treasury stock. The location of the property is Forty-nine Creek, 8 miles from the City of Nelson, in the same free gold belt as the Athabasca and Poorman. The development work comprises two shafts 36 feet deep and a number of cuts, which, so far, have shown a continuous ore body running 1,000 feet. Assays have been taken of the ore running from \$80.00 to \$112. It is stated on good authority that some of the richest samples taken from any mine in the world have come from the Referendum Company. The official brokers of the company are E. N. Ouimette & Co., Rossland, and the Bank of Montreal is the official bank of the company.

SLOCAN.

(From Our Own Correspondent.)

That the depression existing in this division from the operation of the eight hour law has not succeeded in utterly driving away capital is evidenced by a number of deals which have recently been consummated. The well known Monitor mine near Three Forks—the only galena proposition in the Slocan where gold is an economical factor—is reported under bond to a company represented by the Wilson Bros., who are best known in this Province through their operations at the Last Chance mine near Nelson and sundry smaller investments in the Boundary. The amount of the bond is variously stated at from \$60,000 to \$120,000, a small consideration having already been paid to bind the agreement.

The other deals referred to were mostly in the neighbourhood of Slocan City and furnish a welcome change from the incessant dullness which has characterized that section for some time past. There is no gainsaying the fact that the granite area or what is more generally known as the dry-ore belt has been under a cloud during the last two years, although whether it really deserved the "black eye" it has received is an open question, and one which only the future can decide; it is a relief, however, to note the important moves which are now being made in that direction. With the Arlington and Evening Star working full forces, the Chapleau and White Sparrow, each under bond for \$30,000, and the Skylark and Ranger reported bonded for \$18,000 with 10 per cent. down, things are to say the least, looking up.

The feature of the month, however, in mining circles, has been the phenomenal discoveries of ore at the Noonday mine near the Galena Farm. This property, which was never considered of exceptional promise, has been operated for some time under a lease, and during the last few weeks those in charge have come across probably one of the finest showings of ore ever seen in the Slocan. At present writing they have over three feet solid in the face, and are employing upwards of forty men in three shifts of eight hours each at "Union" wages. The ore, which consists largely of galena and associated minerals fairly cemented at times with native silver in the form of fine wire and laminae, is being sacked and brought down the hill at the rate of 15 tons a day, which it is needless to say will net a handsome return to the lessees, who, by the way, have in addition an option to bond for \$35,000 at the expiration of their lease. While of course such a magnificent result is bound to be only temporary, one could almost wish that the unfortunate Galena mines, which are in the immediate vicinity and likely to change hands in the near future, had encountered something similar in their excavations, although what effect even that could have on a concern so enormously over-capitalized is problematical.

The parsimonious tactics pursued by the present legislature must surely reach a climax ere long or there will be no means left of replenishing the exchequer. Not content with the damage they have already inflicted upon this unhappy district in the passage of the eight hour law and the niggardly appropriations provided in the estimates for roads and trails, they must proceed to deprive the Slocan of its most responsible government official, in the person of the Gold Commissioner. How the public affairs of the district are to be properly administered without an efficient staff passes the comprehension of most people, but apparently causes no alarm among those comfortably domiciled at Victoria.

The list of miniature mining excitements has been added to, by one which is now in progress at the head of Kettle River. Placer gold has most certainly been found in small but paying quantities, and a few will doubtless profit by its discovery, but it is hardly likely that anything in the nature of a Klondike will result, the number of men already in the neighbourhood being even now in excess of its prospective resources. It may, however, have the desirable effect of stimulating search for the precious metals in a district hitherto little appreciated.

EAST KOOTENAY.

(From a Correspondent.)

Windermere.—This section of East Kootenay is attracting much attention just now, and a word or two in regard to its characteristics may not be amiss. While a stranger, on taking a cursory glance at the map might conclude that Windermere is out of the world, yet such is not the case. An excellent wagon road connects it with Fort Steele; and during the summer, semi-weekly steamer trips are made from Golden on the main line of the C.P.R.

Mining matters are looking up well; the more so that the mineral resources of this section of the country are not confined to a circumscribed and narrow area, but spread over the entire district, of which the pretty little town of Windermere is the centre.

The Toby, Horseshoe, Boulder and other creeks, rising in the Selkirks to the west and northwest of Windermere, are receiving great attention at present, and are making a showing so remarkable as to bid fair to place the Windermere district high in the estimation of the mining fraternity. The Delphine, owned by R. A. Kiumpton, has probably the most practical development of any claim in the district. A shaft has been sunk in ore for 140 feet, and a carload shipped three weeks ago to the Trail smelter. Returns are not yet to hand. This property is on Toby Creek, and the principal product of the ore is copper and silver.

Other claims are looking up in first-class shape, so many that lack of space forbids us to enumerate them, but should development prove the surface showings to continue with depth, this district will take a high place among producing localities in British Columbia.

Fort Steele.—The Morning group, consisting of 14 claims, was sold during the month to P. C. Stoess and C. F. Lucas, of Spokane. The consideration has not been made public. The ore from these claims must be brought to Fort Steele over the Boulder Creek trail, or the trail down the east fork of Wild Horse. Should extensive development be decided on, it will be necessary to build a wagon road over one of these routes. The owners, from personal inspection, are very well pleased with and confident in their newly acquired property.

The Kootenay King, owned by William Voss, has been sold to C. H. Wolf and his associates for the sum of \$10,000 cash in three months. The adjoining property known as the Barnes claims, was sold to the same parties for \$5,000, on similar terms.

Moyie.—At the St. Eugene, the stone foundations of the new concentrator are completed and the framing of the building has commenced. The flume has been finished to within 200 feet of the lake shore. The news of the sale of 60 per cent. of the property is now confirmed, the Gooderham Company paying \$350,000 for the same.

PUBLICATIONS.

LQUID Air and the Liquefaction of Gasses—by T. O'Connor Sloane, Ph. D.: Norman W. Henley & Co., New York.

This work opens with a chapter each on Physics, Heat, and Heat and Gasses. It then traces in considerable detail the liquefaction of gasses from the time of Faraday down to the latest work of Dewar and Tripler. Numerous illustrations of the apparatus employed accompany this part of the work. The Joule-Thompson effect is next considered. Following this is a description, with numerous illustrations of the apparatus employed by Linde and Hampson in the production of liquid air, and the work concludes with a reference to some of the applications of low temperature and a table of physical constants.

Altogether a very readable book has been produced and one which cannot fail to be of interest to those having a knowledge of Physics necessary to its proper appreciation.

The Influence of Mechanical Draft Upon the Ultimate Efficiency of Steam Boilers.

The attention of mechanical engineers, and others interested in the economic use of steam power, is being more and more directed to the subject of substitution of mechanical draft for the ordinary lofty and expensive chimney.

Among the points in favour of the draft produced by mechanical draft plant, as compared with a boiler plant with chimney.

In the case of a plant costing \$80,000 a saving of \$7,000 can be effected by the substitution of mechanical blowers to produce draft, instead of a chimney. One extensive manufacturing firm in the United States has already shown its faith in the mechanical draft by the removal of a very tall

and expensive chimney, and the introduction in place of this of a sufficient number of mechanical blowers to do the required work.

A considerable amount of unconsumed carbon, which escapes as smoke through the ordinary chimney, is utilized in the production of heat, when mechanical blowers are used.

The intensity of draft produced by mechanical blowers makes it a simple matter to maintain a combustion rate higher than that ordinarily obtained with a chimney.

The comparatively low rates of combustion, which have heretofore obtained are largely due to the inability of the ordinary chimney to overcome the increased resistance incident to the maintenance of a higher rate of combustion.

A problem that has to be faced in most boiler plants is that of increased capacity. It then becomes a question whether the desired result can be obtained by forcing the existing boilers by adding to their number. In one case a considerable increase is required, while in the latter case not only more boilers, but a new chimney is required. It is evident, from results obtained in the merchant and naval marine, that higher efficiency of combustion can be obtained under proper arrangements, with mechanical draft than by any other method.

From this it is seen that the present interest in the subject of mechanical draft, to replace the tall chimney, points to the future application of this method of assisting combustion of fuel, as a most important factor in steam boiler practice.

"An English Expert on the Klondike." Price 50 cents.
Publishers: Geo. N. Morang & Co., Toronto.

This a report by Mr. A. A. C. Treadgold on the gold fields of the Klondike.

This gentleman was sent out by an English mining and commercial journal to obtain a true report as to the condition of the Canadian Yukon District as a gold-producing region.

He has given a thoroughly business-like account of conditions at the Klondike. In no published account of the new famous City of Dawson and its vicinity is such a fair and impartial survey taken of present conditions and future possibilities.

Anyone who reads this little work may feel certain that he is receiving reliable information with regard to this gold-field, and nearly every possible point that is likely to be of interest or advantage to capitalists and miners is dealt with in a fair and business-like manner.

The grievances of the miners are enumerated and hints are given as to possible remedies for evils which naturally exist in a newly settled mining district.

Altogether the book is very satisfactory, and must prove valuable as well as interesting to those who read it.

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.

COMPANY INCORPORATIONS OF TWO YEARS AGO.

TO THE EDITOR:—The other day I picked up a copy of the B.C. Directory of Mines for June, 1897, a quarterly publication by the late Mr. Alexander Begg. It contained, amongst other things, a list of the mining companies incorporated in British Columbia up to 25th March, 1897, which makes instructive reading and affords food for reflection. The mania for incorporating mining companies with a visionary capital of anywhere from ten thousand dollars to twenty millions was then at its height. I went to work and reckoned up the companies incorporated. There were 779 of them. Now, of these 430 were set down as having a stock of one million dollars or over. Many were for five millions; one at least for twenty millions. This was but little more than two years ago, and yet, where are the majority—the vast majority—of those companies and their promoters now? Some of the companies are more familiarly than favourably known to a public they coolly defrauded; others have dropped into a nameless oblivion. Their various promoters are scattered all up and down the Dominion, and the wide earth generally. One particularly flagrant case was that of a lawyer, hailing from one of the

Prairie Provinces, who posed as an expert mining man, a capitalist, too, forsooth, and gathered in his friends among a simple agricultural population for a considerable amount. He is now practising law in Winnipeg on a law clerk's salary. Another case I call to mind was in Vancouver, less than three months after the date of the publication I have above referred to. In this case, however, the poor fellow was more fool than knave. I was informed that he had an office in a stylish block in the heart of the business quarters of Vancouver. So he had—about four months before. But he wasn't there when I called, and no one knew anything about him. I found him after a long search. I.e. the wealthy mining broker and promoter was stringing wires for a plumber at a dollar a day. He told me he had dropped \$1,800, the savings of years, in six months.

I could quote many other interesting and peculiar circumstances from my own knowledge, should occasion require. The evil effects of this "wild-cat" system (for it was nothing else) on the credit of British Columbia abroad must have been very great. It cannot be said that the provincial press did not sound a warning, and I am aware that the MINING RECORD was first in denouncing the airy flotation of irresponsible mining companies run and financed (where they were financed at all) by a judicious admixture of fools and knaves. But to no purpose. And now the harm is done, and we are still smarting from the effects. Not ten per cent. of the 779 incorporated companies I have mentioned ever paid one copper in dividends. Yet, in spite of legislation, in spite of warnings to the public, a very slight inflation of mining values would turn the whole Devil's Sabbath loose again, and sink British Columbia's reputation in Europe a foot or two deeper in the mire.

Victoria, B.C.

SCRUTATOR.

ROAD REQUIREMENTS IN THE BRIDGE RIVER DISTRICT.

TO THE EDITOR:—The Bridge River District is, in my opinion, bound to be in time a great mining centre. I may say I was the first person to invest money in that district in quartz mining. Cadwallader Creek and the South Fork of Bridge River was run over for placer mining years ago, but until 1897, when I did some work on the 40-acre group of mines, not a dollar had been expended in the district for quartz mining. In the fall of 1897 the men who were working for me discovered the Ida May, Lorne Group and the Ben d'Or, so that I can safely claim to be the pioneer of the district. I have been cautious not to boom the country until I felt satisfied that it was worthy of it, and now I honestly believe it is entitled to some notice from the mining journals of this country. For about nine miles along the South Fork of Bridge River and Cadwallader Creek the ground has all been staked, and in no single instance where bona fide assessment work has been done has it failed to show ledges containing free gold, but, of course, there are many claims for which assessments have been recorded that have not been actually developed to the extent of an expenditure of ten dollars in labor. The great drawback to this section is its supposed inaccessibility, which has been the means of keeping mining men from investigating its resources. Yet, the difficulties of travel are not so great as supposed. If the Government would expend a reasonable sum on improving the trails, even these difficulties would largely disappear. A road should be built from Anderson Lake to Bridge River, a distance of about thirty miles, or if not a road at least a trail should be constructed at once. This would open up a great area of mining country.

Vancouver, B.C.

ROBERT B. SKINNER.

THE SLOCAN STAR AND THE MINERS' UNION.

TO THE EDITOR:—In your July number H. F. E., of Rosslund, refers to an occurrence at the Slocan Star mine, as one indicative of great good feeling on the part of the Miners Union, and greatly to the credit of that institution.

Allow me to give the version of the facts related by Mr. Oscar White, the superintendent of the mine, immediately after the happening to which your correspondent has alluded. When the miners left the Slocan Star, 35 men remained who were working as carpenters, timbering the mine. These were not union men and had no wish to strike. On Monday morning, June 5th, 100 men walked up from Sandon and were at the mine before 7 o'clock. They ordered the carpenters to accompany them to Sandon and prevailed upon them to do so.

Mr. Oscar White went to Sandon and during the forenoon was accorded an interview with the committee of the Miners

Union. He was informed by their committee that as the Slocan Star was one of the mines that was in the Union's bad-books it was their intention to prevent any work being done therein until the management had acceded to their demands, and that the more danger there was to the mine from the non-performance of this work the greater reason there would be to prevent its completion.

Mr. White stated that the work was not essential to the safety of the mine, that he did not apprehend any damage even if the timber did not go in. He brought men that had been working in the mine to substantiate his opinion, until the committee expressed themselves as satisfied on the point, and gave permission for the carpenters to return and finish the work upon which they had been employed.

Your correspondent talks of boards of arbitration to settle labour disputes.

What could be expected of such a board more liberal to the men than was offered by the management of the Slocan Star?

At 35 cents per hour the wages for an eight hour day would be \$2.80. The Mine Owners Association offered \$3.00. The Slocan Star stayed out of the association and offered their men \$3.25. Of the 80 cents per day originally in dispute the management had conceded 55 cents.

Yet because they did not choose to specifically comply with the literal demand of the Miners Union, men who were willing to work for them were by threats of violence driven away.

Mr. Byron White, the general manager of the company, left for the States immediately after the affair. He remarked that he had seen all he wished of labour troubles in other countries and had no intention of making any fight in the Slocan. He would stay away a year, and if necessary two, and return when quiet was re-established.

H. F. E. thinks that the episode speaks well for the union. Your present correspondent regards it as one of the most disgraceful events in the history of the Province. A step toward the inauguration of a reign of terror such as has cursed the mining camps in Idaho for a dozen years.

The boast loudly made, and hitherto with good foundation, that life, liberty and property would be protected in B.C., and that the club of the law was poised ready to fall upon the head of anarchy wherever it might appear, seems at present to be empty and idle.

Members of the Miners Union in the Slocan use the names of representative men as authority for the statement that the government will not allow labourers to be brought into the Kootenay to take the places of the strikers, and the Attorney-General, who was in the neighbourhood of Sandon when the affair took place at the Slocan Star, and who might easily have addressed to the striking miners a few words of explanation as to how far they could legitimately go in attempts to carry their point, and how absolutely certain it was that they must stop short not only of violence, but of intimidation, passed on instead to the disastrous social function at Rossland, that has apparently cut short his political career. D. X. Y.

Slocan, July 15, 1889.

PRODUCING MINES.

ROSSLAND.

Our Rossland correspondent telegraphs the following returns: Total ore shipments this year to July 27, 75,327 tons; estimated shipments July 27 to 31, 2,150, making the total shipments from the Rossland mines for the first seven months of the present year, 77,477 tons, to which the Le Roi contributed 46,500, War Eagle 25,125, Centre Star 3,887, Iron Mask 1,715 and miscellaneous 250, valued at \$1,400,000 gross.

ROSSLAND.

The mine exports through the port of Rossland for the month of June were as follows:

	Tons.	Value.
Ore.....	7,710	\$216,651
Matte.....	410	252,650
Total.....	8,120	\$469,301

NELSON.

The following report of mine exports is made from Nelson for the month ending June 30th:

	Value.
Coke, 1,319 tons.....	\$ 6,190
Lead bullion.....	36,835
Gold bullion.....	18,937
Total.....	\$ 61,962

SLOCAN.

The following returns of exports are made from the Kaslo port for June:

Gross pounds ore.....	2,206,410
Pounds lead.....	1,161,297
Ounces silver.....	108,660
Value.....	\$ 99,953

Of this amount the Kaslo clearances were:

Gross pounds ore.....	1,598,000
Pounds lead, contents.....	945,200
Ounces silver.....	78,345
Value.....	\$ 73,437

From the subport of Nakusp the following is reported:

Gross pound ore.....	608,410
Pounds lead, contents.....	216,097
Ounces silver.....	30,315
Value.....	\$ 26,516

The shipments of ore from the Slocan Lake points from Jan. 1 to July 22, aggregate 2,483 tons.

SANDON.

The following is a list of ore shipments over the K. & S. from Sandon for the week ending July 21:

Mines.	Tons.
Wonderful.....	7 1/2
Trade Dollar.....	32
Total.....	39 1/2

WHITEWATER ORE SHIPMENTS.

The following is a statement of ore shipped from this station for the week ending July 21:

Mine.	Tons.
Jackson.....	30
Total.....	30

M'GUIGAN ORE SHIPMENTS.

The ore shipments from the McGuigan for the week ending July 21 were:

Mine.	Tons.
Rambler.....	60
Total.....	60

NELSON.

The following is the result of the Hall Mines smelting operations for the four weeks ending June 30th, 1899: Fifteen days smelting—116 tons of Silver King ore and 385 tons of custom ores were smelted; 119 tons of lead bullion were produced, containing (approximately) 115 tons of lead, 29,760 ounces of silver and 184 ounces of gold.

COAL SHIPMENTS.

JUNE.

	Tons.
The New Vancouver Coal Co.....	36,323
Wellington.....	14,620
Union.....	10,395
Total.....	61,338

FOREIGN SHIPMENTS TO JULY 20TH.

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

Date.	Vessel.	Destination.	Tons.
6—SS.	Tartar.....	San Francisco.....	1,576
7—SS.	Siam.....	San Francisco.....	4,385
7—SS.	Rapid Transit.....	Port Townsend.....	8
7—SS.	Titania.....	Port Los Angeles.....	5,099
10—SS.	Amur.....	Alaska.....	461
11—SS.	Mineola.....	Port Los Angeles.....	3,453
15—SS.	Robt. Adamson.....	San Francisco.....	4,493
18—SS.	Dalny Vostek.....	Port Arthur, China.....	657
20—SS.	Siam.....	San Francisco.....	4,373
Total.....			24,505

THE METAL MARKET—JULY.

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

The market this month, while in some respects slightly improved, continued for the most part dull and depressed. Silver shows a slight decrease from last month.

LEAD.

New York prices have risen considerably; quotations varying from 4.55 in the earlier part of the month to 4.52½, a marked increase on last month's figures. St. Louis prices, 4.50; Chicago, 4.55. The Colorado strike situation is simplified to the extent that the Supreme Court has declared the eight-hour law unconstitutional. The smelters are now in negotiation with the men to effect a settlement. Considerable delay is likely to ensue, however.

SILVER.

Silver continues very dull; the only fluctuation in prices being from 60¼ to 60⅜.

COPPER.

The copper market has stiffened very much during the month, and continues strong, heavy transactions are reported and copper for delivery within 60 days is very scarce. For later deliveries full prices are asked. Lake copper has risen to 18½ present price, electrotypic 17⅞, and 16⅞ cathodes; casting copper 17⅞; a marked increase all round.

SPELTER.

Low prices still prevail, our latest quotation being 5.87½.

THE ROSSLAND STOCK MARKET.

(Special report and quotations by Messrs. Dickinson & Orde, corrected July 20th, 1899.)

The stock market in Rossland and in Eastern centres during the last month, was in by no means a healthy condition. This fact was undoubtedly due in a large measure to the labour trouble, and when this difficulty between employers and employees is satisfactorily settled, we anticipate a very decided improvement. The majority of mines in the Sloca still being worked are now employing the contract system; in the Boundary district there has been some trouble, but on the Knob Hill, Old Ironsides, Winnipeg and Brandon and Golden Crown, miners are receiving \$3.50 per day for eight hours work. Almost all dealing in Sloca stocks has ceased, though a little trading has been done in Rambler-Cariboo, consequent on the good reports of the mine by Mr. Adams, their superintendent. This company yesterday held a meeting at Spokane, at which it was decided to disincorporate the present Washington company and reorganize under laws of British Columbia as the Rambler-Cariboo Mines, Limited. Meanwhile, the management have found

it necessary to increase the capital stock by another quarter of a million shares, making a total of 1,250,000, of the par value of one dollar. The shares dealt in to the largest extent during last month were, in order: Winnipeg, Okanagan, Homestake, Rathmullen, California and Tamarac (placed); of these Winnipeg was most decidedly the favourite, and it has withstood the general depression better than any other active stock, in fact there is a very decided impression here that Winnipeg has passed the doubtful stage. A meeting of the Okanagan company was held at their offices on the 11th inst., and the following day a statement of the company's financial condition appeared in the *Rossland Miner*. The stamps of their new mill are now falling and the clean up, the management say, will be next month. From all evidences we would say the chances are distinctly in favour of a satisfactory return, taking into consideration of course the amount of gold which will be absorbed in the plates.

A meeting of the Homestakes Mines, Limited, will be held next month, at which there will very likely be a well attended gathering of stockholders, so much interest is now being felt in the property. Rathmullen has remained fairly steady, but has weakened a trifle lately. California, this stock has been scarce and difficult to obtain. It is said that a strong Montreal Syndicate, composed of Jay P. Graves and others interested in the Knob Hill and Old Ironsides, are prepared to extensively exploit the ground, and, if necessary, spend two hundred thousand dollars for that purpose. Tamarac Pl'd has eased off considerably, with but little demand at the present time. There has been considerable enquiry for the shares of the Van Anda due to the fact that the company's smelter is in operation. Excellent reports are the order of the day from Knob Hill and Old Ironsides, especially the former. The Granby smelter, which is being erected to treat the ores of these two mines and the City of Paris in the Boundary district, is well under course of construction. A circular letter has been sent out to all Deer Park shareholders requesting them if they cannot be present themselves at the extraordinary general meeting of the company, to forward their proxies to the secretary. The meeting is to be called to consider the advisability of reorganizing with a capital of \$1,400,000 in shares of \$1 each, paid up as to 60 cents, assessable as to 10 cents, no assessments to be for more than one cent, and there to be an interval of at least three months between each call. Shareholders will have the privilege of exchanging their stock, share for share, on payment of one cent per share on or before 1st October, 1899. Out of the moneys received \$7,000 will be paid to the old company to pay its liabilities, and the balance to be paid into the treasury of the new company. Transfer books will be closed from 27th July to 4th August, inclusive. Canadian Gold Fields Syndicate will shortly open an office in Montreal, which will add to its popularity there.

The Mackenzie & Mann interests in the Boundary country will shortly be consolidated under the name of the Dominion Copper Company. The company has been formed with a capital of \$5,000,000, shares of the par value of \$1 each. Two million shares will be placed in the treasury, 2,000,000 will be paid to the promoters for properties, and 1,000,000 kept in reserve for such purposes as the Board of Directors may in future decide. The properties already included in the incorporation are the Brooklyn, Stemwinder, Standard, Montezuma, Idaho and the Rawhide, all in Greenwood camp in the Boundary district. All individual or promoters' stock will be pooled for the period of one year. In Republic stocks the trading has been largely in Princess Maude at from 4 to 6 cents.

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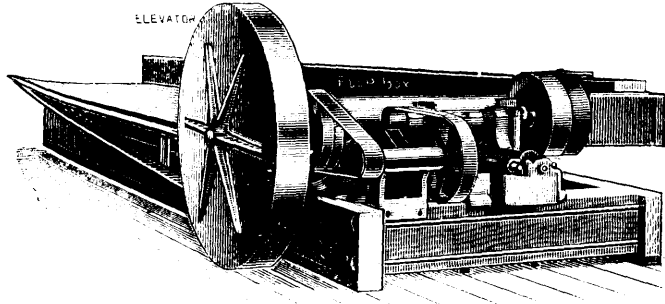
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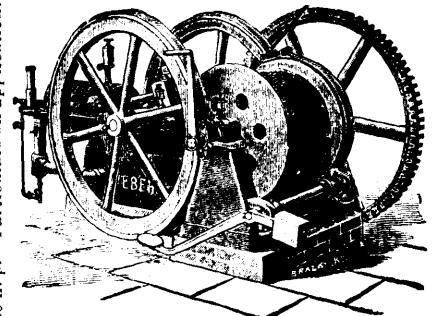
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Sealed Tenders, addressed to the undersigned, and marked on the envelope "Tender for a Placer Mining Claim," will be RECEIVED at this Department up till noon on

FRIDAY, THE FIRST DAY OF SEPTEMBER, 1899,

for placer claims and fractions of claims on Dominion Creek reserved for the Crown. The following is a list of the numbers of the claims and fractions and the approximate frontage thereof as surveyed by Messrs. James Gibbons and R. W. Cautley, Dominion Land Surveyors:—

BELOW UPPER DISCOVERY.			
No.	Length in ft.	No.	Length in ft.
1A	5	10A	33.3
2A	19	15A	42.25
3A	30.5	31A	43.
8A	87.4		
ABOVE LOWER DISCOVERY.			
No.	Length in ft.	No.	Length in ft.
1A	12	6A	35.00
2A	59.1	10A	143.25
4A	1.25		
BELOW LOWER DISCOVERY.			
No.	Length in ft.	No.	Length in ft.
1A	56.3	75A	24.7
2A	7.2	76	500.
2C	20.3	77	449.8
8A	34.00	16C	23.8
9A	39.25	18A	164.7
11A	98.4	78A	3.6
13A	68.5	80	431.3
16A	40.25	81A	15.3
20	202.1	83	500.
21A	71.9	84	500.
22	500.	85	500.
22A	60.7	85	500.
23	446.2	87	500.
25	500.	87A	500.
26	120.66	87B	387.9
31	350.5	89A	35.1
33	500.	91	500.
34	500.	92	500.
36	500.	93	500.
37	500.	94	500.
38	352.	95	500.
68A	94.7	96	500.
69A	40.5	07	500.
70A	72.6	98	500.
71	414.4	99	500.
73A	12.2	100	478.7
74A	21.3	101	119.

Each tender shall specify the numbers of the claims and fractions tendered for and also the amount of bonus offered for each and fraction. The tender may be for the whole lot or any one or more of the claims and fractions, and must be accompanied, by an accepted cheque in favour of the Minister of the Interior for 10 per cent. of the amount offered, one-half of the remainder to be paid into the Department of the Interior at Ottawa, or to the Commissioner of the Yukon Territory at Dawson within 30 days from notice of acceptance of tender, and the balance within six months thereafter with interest at the rate of 4 per cent. per annum.

Entries for the claims and fractions will be granted in accordance with the Placer Mining Regulations on acceptance of tender. The entries will be subject to the usual royalty and the provisions of the said regulations from time to time in force, except as to representation provided for by Clause 39, which will not be required.

The claims and fractional claims for which entries may be granted shall not include any portion of the bench and hill claims for which entry may have been previously granted.

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JOHN R. HALL,
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Department of the Interior, Ottawa, 27th May, 1899.

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Mining Stocks.

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

Company.	Capital.	Par Value.	Price.
TRAIL CREEK.			
Alberta	\$1,000,000	\$1	\$ 4½
Big Three	3,500,000	1	26
Bruce	1,000,000	1	10
Butte	1,000,000	1	02
Caledonia Con	1,000,000	1	5½
Centrestar	3,800,000	1	
Commander	500,000	1	10
Deer Park	1,000,000	1	2½
Enterprise	1,000,000	1	20
Evening Star	1,000,000	1	11
Georgia	1,000,000	1	05
Gertrude	500,000	1	11
Golden Drip	500,000	1	15
Gopher	1,000,000	1	03½
Hattie Brown	1,000,000	1	03
High Ore	500,000	1	05
Homestake	1,000,000	1	14
Iron Horse	1,000,000	1	10½
Iron Mask	500,000	1	70
I.K.L.	1,000,000	5	10
Iron Colt	1,000,000	1	10½
Jumbo	500,000	1	25
Le Roi	£1,000,000	£5	£5
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	7
Nest Egg-Firefly	1,000,000	1	05
Northern Belle	1,000,000	1	4
Novelty	1,000,000	1	4
Palo Alto	1,000,000	1	05
Poorman	500,000	1	14
R. E. Lee	2,000,000	1	5
Red Mountain View	1,000,000	1	3
Roseland, Red Mountain	1,000,000	1	11
St. Elmo	1,000,000	1	7½
Silverine	500,000	1	6
Silver Bell Con	500,000	25	4
Victory Triumph	1,000,000	1	08
Virginia	1,000,000	1	20
War Eagle Consolidated	2,000,000	1	3 70
White Bear	2,000,000	1	4½
AINSWORTH, NELSON AND SLOCAN.			
American Boy	1,000,000	1	11
Arlington	1,000,000	1	6½
Argo	100,000	0 10	10
Athabasca	1,000,000	1	39
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	20
Dardanelles	1,000,000	1	12½
Dellie	700,000	1	12
Exchequer	1,000,000	1	12
Fern Gold	200,000	0 25	31
Goodenough	800,000	1	11
Gibson	650,000	1	17½
Hall Mines	£300,000	£1	£1
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	23
Ottawa and Ivanhoe	1,000,000	1	12½
Payne	3,500,000	1 00	1 40
Rambler Con	1,000,000	1	29
Reco	1,000,000	1	1 00
Slocan-Reciprocity	1,000,000	1	—
Slocan Start	500,000	50	1 25
Santa Marie	1,000,000	\$1	05
Silver Band	250,000	0 25	12½
Slocan Queen	1,000,000	1	10
Star	1,000,000	1	07
St. Keverne	1,000,000	1	04½
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	4½
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	12
Victoria-Texada	150,000	0 25	04
VANCOUVER ISLAND.			
Alberni Mountain Rose	250,000	1	09½
Consolidated Alberni	500,000	1	5
Mineral Creek	500,000	1	05½
Mineral Hill	750,000	1	05
Quadra	500,000	1	05

Company.	Capital.	Par Value.	Price.
CARIBOO.			
Cariboo Gold Fields Ltd	£100,000		
Cariboo Hydraulic Consolidated	\$5,600,000	\$5	1 55
Cariboo M. & D. Co.	300,000	1	25
Golden River Que-nelle	£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	1
Cayoosh Creek Mines	500,000	1	1
Excelsior	500,000	1	1
Golden Cache	500,000	1	1
Lillooet Gold Reefs	200,000	25	
FAIRVIEW CAMP.			
Smuggler	1,000,000	1	03½
Fairview Corporation	1,000,000	25	09
BOUNDARY CREEK.			
Boundary Creek M. M. Co.	1,500,000	1	05½
Brandon and Golden Crown	1,500,000	1	28
King	1,500,000	1	25
Knob Hill	1,500,000	1	98
Morrison	1,000,000	1	15
Old Ironsides	1,000,000	1	1 13
Pathfinder	1,000,000	1	16
Pay Ore	1,000,000	1	07½
Rathmullen	1,000,000	1	07½
Winnipeg	1,000,000	1	30
CAMP MCKINNEY.			
Camp McKinney Development Co.	600,000	1	23
Cariboo	1,250,000	1	1 20
Minnehaha	1,000,000	1	24
Waterloo	100,000	10	09
Pontenoy	1,000,000	1	18
O'Shea	100,000	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
Sailor	1,250,000	1	15
REVELSTOCK.			
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	\$38 00

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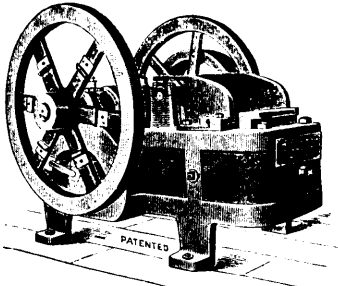
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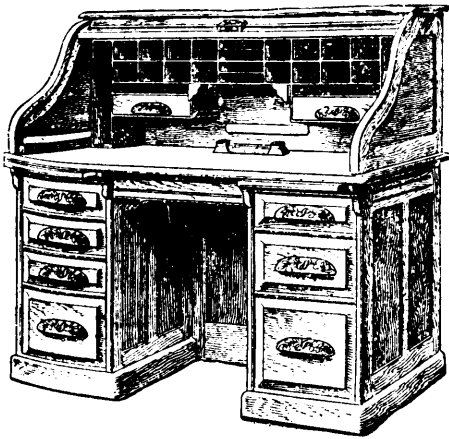
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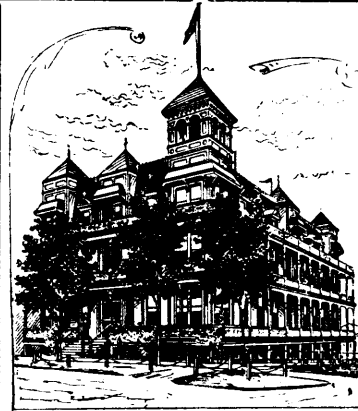
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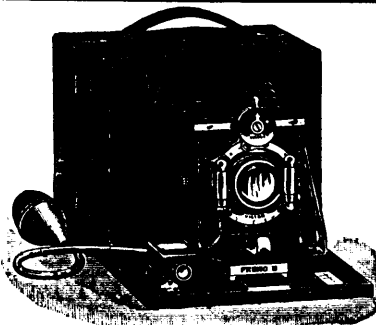
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For Plumper Pass—Wednesdays and Fridays at 7 o'clock.
For Moresby and Pender Islands—Friday at 7 o'clock.
Leave New Westminster—For Victoria Monday at 13.15 o'clock.
Thursday and Saturday at 7 o'clock.
For Plumper at 7 o'clock.
For Plumper and Moresby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

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BARCLAY SOUND ROUTE.

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

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