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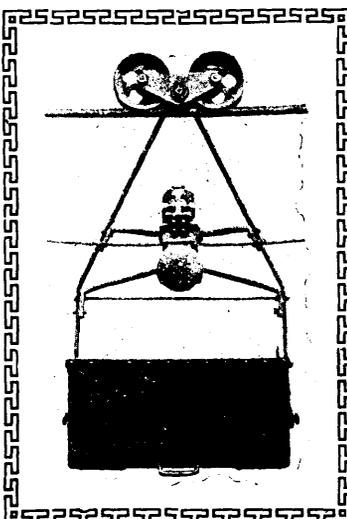
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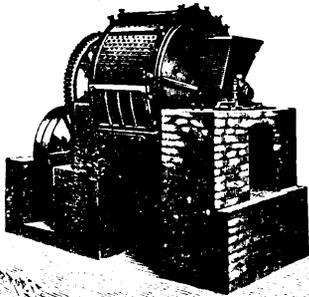
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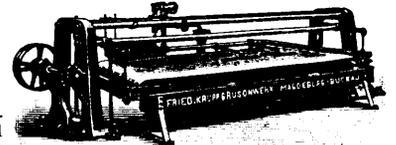
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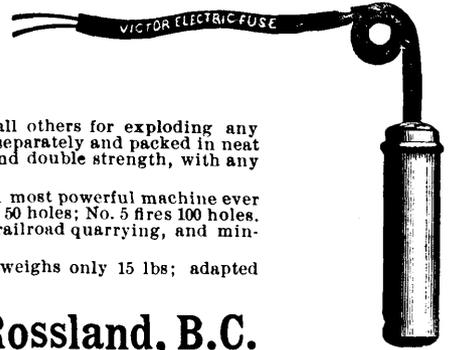
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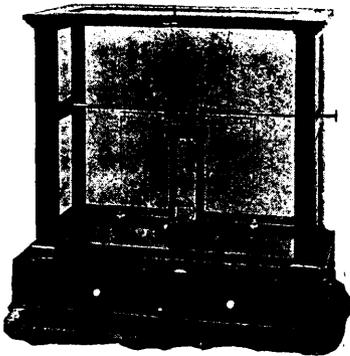
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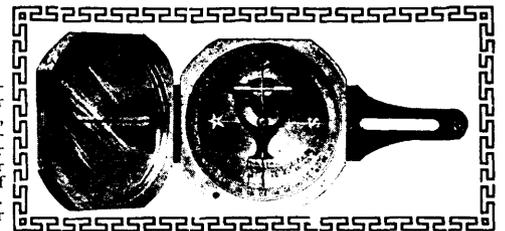
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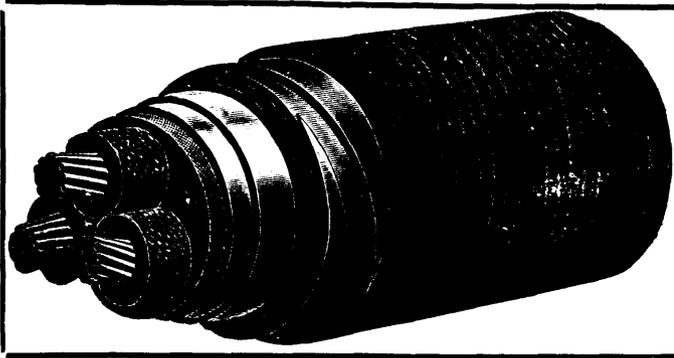
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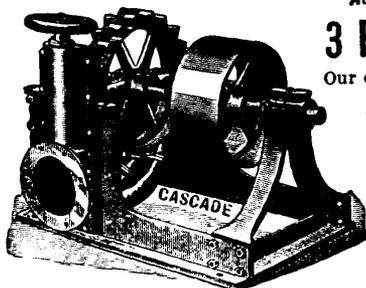
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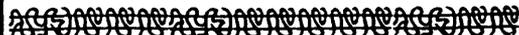
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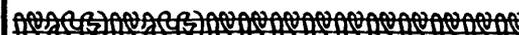
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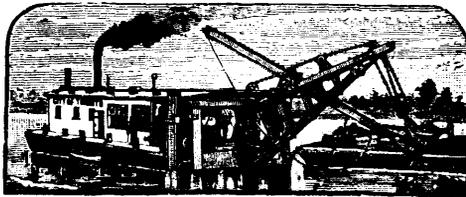
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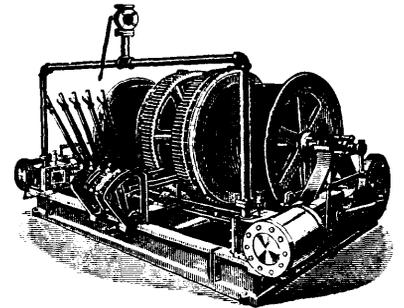
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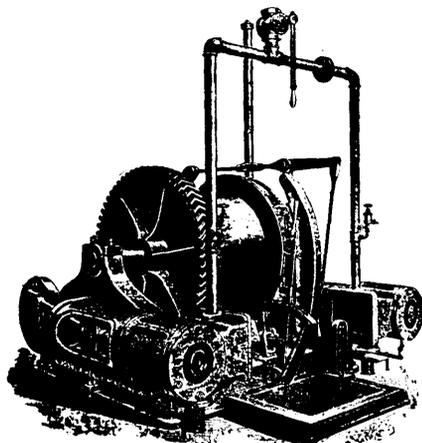
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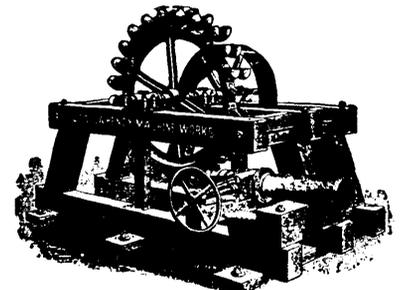
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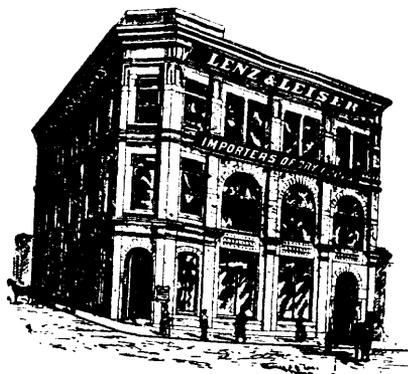
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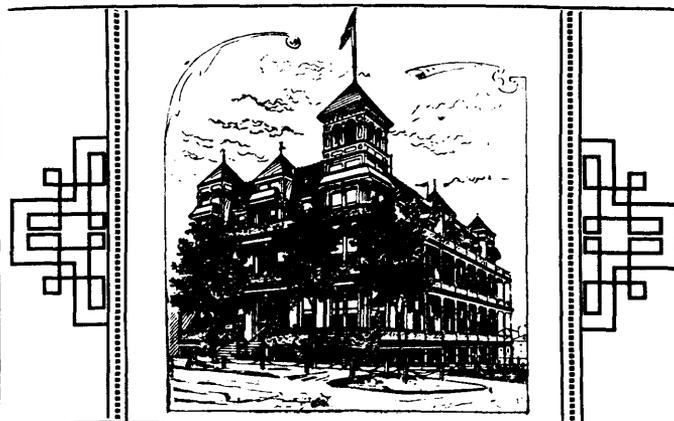
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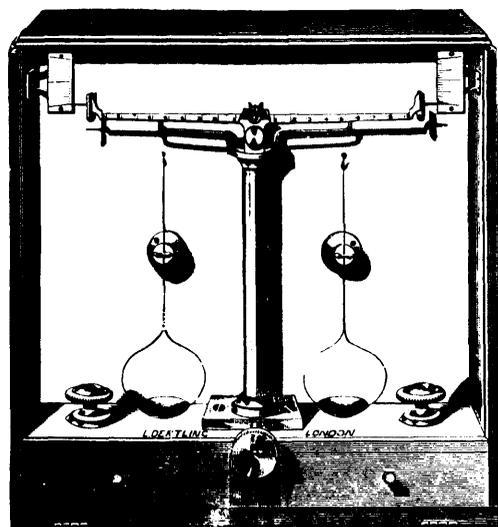
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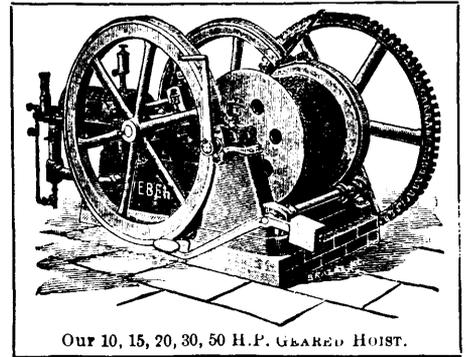
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The Mining Record.

Vol. IV.

JANUARY, 1898.

No. 1

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Devoted to the Mining Interests of British Columbia.

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P.O. Drawer 57, Victoria, B.C.

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BUSINESS MANAGER, B.C. MINING RECORD,
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EDITORIAL NOTES.

DURING the past twelve months the most remarkable progress in the history of mining in British Columbia has taken place. These developments, albeit more convincingly evidenced in the districts of West Kootenay, are by no means confined to one locality, and sections of the province whereof a twelvemonth ago little was heard have been meanwhile explored and opened up with results that can be only regarded as eminently encouraging.

But figures in some cases convey a more powerful and permanent impression than words, and when it is stated that the value of the British Columbia lode mines' production for 1897 is nearly equivalent to that of the seven years preceding or from the inception, practically speaking, of this class of mining as a provincial industry, some conception will be formed of the highly satisfactory nature of the past year's record.

The majority of last year's producing and dividend paying mines are situated in the Slocan districts, but the list of properties that are proving valuable under development in the Rossland and Trail Creek camps is notably becoming larger—the value of the output from these last named camps during 1897 of about \$3,500,000, testifying to a very noteworthy increase over the figures of former years.

Consequently upon this mining activity in West Kootenay the growth and prosperity of the principal commercial centres of West Kootenay—Nelson and

Rossland having become incorporated as cities during the year—has been very marked, the population has largely increased, and many new industrial enterprises have been established.

South Yale and the Harrison Lake districts, the Lillooet, Big Bend, Kamloops, East Kootenay and also from the Coast camps reports for the year are without exception favourable, while the recent rich discoveries of placer gold in Omineca and of quartz in Cassiar are noteworthy. The returns from hydraulic operations in Cariboo will not possibly be greater than those of '96, but this may be accounted for without difficulty, on the ground that much of the work being carried on by companies in this district is of a preliminary character and actual results may not be expected therefrom for some time to come. But according to the estimates of a disinterested and prominent mining engineer we are assured that from one mine alone in this historic camp, upon the installation of adequate machinery, gold will be saved at the rate of two million dollars annually for many years to come.

It is said that never have the prospects seemed brighter in the interests of mining in British Columbia, nor has any year opened under more favourable auspices. English investors have learnt to feel confidence in the country and while it is necessary to advise the incautious to beware of the unscrupulous devices of promoters and of the injudicious risking of capital in semi-fraudulent undertakings, a great many of the companies recently floated in London to acquire mining property in the province are reasonably trustworthy. The Yukon excitement, although very likely to end disastrously to the many who have foolishly been carried away with the idea of the facilities offered of rapid fortune-making in that inhospitable region, will at least to a certain degree exercise a beneficial influence in drawing greater attention to our own valuable mineral fields. Furthermore, the assurance of the completion ere the close of the year of the Crow's Nest Pass Railway, whereby the cost of smelting and transportation of ore in Kootenay will be materially reduced; the development of the illimitable coal measures existing at the Pass; the probability of railroad communication facilities being supplied to and opening up thereby the great copper-gold district of Boundary Creek, are among the factors that will contribute to the increased prosperity of the New Year.

At a meeting in London this month of the shareholders of the British Columbia and New Finds Gold

Field Corporation the chairman, enumerating the gentlemen composing the local board in Victoria, said: "Then we have Mr. Turner, who is the senior partner of a firm of merchants in Victoria and Nelson, and with branches in many other places in British Columbia. I refer to him as a business man and not as Premier of the country, for, happily mining in British Columbia has nothing whatever to do with politics." Had the promoters of the Dawson City (Klondyke) and Dominion Corporation, Lt., contented themselves with thus associating Mr. Turner's connection therewith we should have been saved the distressful occurrences of recent date.

There is no question but that the Colorado smelters have, to use an apt but strictly colloquial expression, "got the cinch" on the owners of the Slocan silver-lead mines and they take advantage of the fact for all they are worth. In Colorado wet ores are at a premium, and those then who are fortunate enough to possess a mine of high grade lead ores of this class get the smelting done for one or two dollars per ton and even in some cases free gratis and for nothing. But British Columbians are compelled to pay \$13 and \$14 the ton treatment charges and there is seemingly no alternative. Under present conditions we are unable to treat our lead ores at home, partly because there is a scarcity of dry ore to mix therewith. 'Tis true, 'tis pity, 'tis pity, 'tis true.

There is a great agitation now going on in the States for the amendment of the federal mining laws. If the proposed changes are made the mining laws in the United States will not be dissimilar to those in force in British Columbia, which admittedly are—albeit in minor particulars a few alterations might advantageously be introduced—the best and most liberal in the world.

If the directors of public companies are wise they will certainly see the advantage of securing the services of ex-Cabinet Ministers as members of their boards. One has only to read Sir Charles Tupper's speech to the shareholders of the Yukon Company, of which he occupies the position of chairman, to see the force of this observation. Sir Charles frankly admits the opportunities he now enjoys as the result of his erstwhile eminence in Canadian political affairs and points with pride to the fact that although he was away for three months on the company's business and travelled some twelve thousand miles on this account, his expenses, owing to his "peculiar facilities of travelling in Canada," would not exceed the modest sum of £100. Fortunate company; lucky Sir Charles!

meeting actually took place at Nelson the other day. This, we believe, is the first sign of life this organization has shown. A representative and capably conducted association of mining engineers and mine managers would do valuable work for the province, and moreover suggestions from such a body on points of mining law and advisable amendments thereto would be appreciated by the Government. We fear it is very doubtful whether the existing (but feebly inactive) organization has either "get up" or influence for its opinions to be deemed worthy of consideration.

Some very ugly remarks have been indulged in by both the local and London financial press with regard to the Golden Cache, whether justly or otherwise it is not quite easy to say. It is true the result of the first mill test did not come up to expectations, but nobody having any knowledge of the property ever imagined that it would. Nevertheless, if the rock continues to average \$10.00 it is good enough. Probably what has given rise to the recent criticisms is the refusal of the directors to allow examination of the property by experts. Only a short time ago the application of a well-known and highly qualified provincial mining engineer for permission to examine the mine in the interests of clients was refused, and although another gentleman representing a wealthy English syndicate was allowed to inspect the workings, he was not permitted to sample the mine thoroughly notwithstanding that the property was under offer to his company at the time. Taking these facts into consideration there certainly appears to be cause to ask the whys and wherefores.

From what we can gather concerning the Golden Cache the property is nothing more and nothing less than a good prospect, but there are many equally as good and better of which much less has been said in almost every mining district of the province. We must, however, take exception to the statement advanced by our London contemporary, the *British Columbia Review*, that "the Golden Cache ledge is poor both in quantity and quality." The lode of the Golden Cache is close upon twenty feet in width, gradually converging, however, on either side from the centre and lying very flat; if this is continuous, which as yet, of course, has not been proven, there can be no question as to the abundance of the ore supply. Regarding quality, as we have previously remarked, if the average value of the ore is not less than \$10.00 to the ton, and the mill can be kept running, the shareholders will have every reason to be content. As to Mr. Oldroyd, who invested so heavily in the company's stock this autumn, he has no one but himself to blame if the speculation proves unlucky. He visited the property, he saw what was to be seen and he plunged. If he did not seek competent opinion,

Who would have thought it! There is a British Columbia Association of Mining Engineers and a

whose fault was it? It may be interesting to watch the operations of a plunger, but if his game ends disastrously, one may be pardoned for not feeling altogether sympathetic.

During the month the returns were received of a second Golden Cache crushing. Imagine everyone's consternation in hearing that only \$4.40 gold value per ton was saved on the plates. We learn, however, on what appears to be excellent authority that the batteries were not properly managed—much too rapidly in fact for such slatey ore. Puddles of quick-silver moreover were allowed to accumulate under the batteries and hindered gold collection in the amalgam. Our informant states that it is more than likely that in this run more gold was lost than recovered. Furthermore the ore has been found to contain arsenic and hence concentration will be necessary. We still do not by any means consider the case of the Golden Cache hopeless. The property has, it is true, been overmuch boomed and it is plainly not what it was represented to be. Nevertheless, if it is worked "close" with the best of mechanical appliances and efficient labour there is nothing yet to prove that the mine cannot be profitably operated.

The expediency of constructing a waggon road as proposed between Rossland and Boundary Creek seems to us to be at the present juncture to the highest degree questionable, the fact that the Board of Trade of Rossland has lent its endorsement to the project notwithstanding. In the first place the construction of the roughest description of roadway for the distance contemplated would entail a large expenditure, and to serve what purpose—ostensibly that supplies for the Boundary Creek district may be purchased in Rossland instead of in Spokane. As a matter of fact a very large proportion of the supplies consumed in the western and more important and populous section of the Boundary Creek district are purchased not at Spokane at all, but at Vancouver, and even if this were not the case it is doubtful with the high prices prevailing at Rossland whether the Boundary Creek storekeepers and traders could advantageously replenish their stocks at that place even if waggon road communication facilities therewith were afforded. Again, to consider the question of the expense of such an undertaking as proposed, it is necessary to remember that "freighting" by waggon teams is at the best a costly and slow-going method of transportation. If a road were made at all it would have essentially to be a well-made and well-graded road, or be absolutely useless for the purpose. Now, if we are correctly informed, the intervening country between Rossland and Greenwood or Midway on Boundary Creek, is not only very rough but very mountainous, and to build a well-made road through this country for a distance of sixty or seventy miles would cost even more than was expended on the eighty miles of Government road, constructed some five years ago from Penticton to Boundary Creek—a sum amounting to considerably more than \$30,000. But this expenditure would not be extravagant if the proposed achievement was from any point of view

commendable. We confess that we are unable to recognize its utility. If not from the Columbia River westward, at any rate from Penticton southward we may confidently look forward to the commencement early next summer of railroad construction operations and the anxiously and long expected time will arrive when the Boundary Creek district will be provided with railroad communication with the outside world.

Whom the gods wish to destroy they first make mad. This is a singularly wise remark. Every dog has his day and poor Spokane is beginning to realize that the rich stream of prosperity in the shape of the Kootenay trade that has flowed Washingtonwards for so long, is now, with the completion of the Crow's Nest Railway, to be diverted largely into another and a more natural channel. So the business men of this enterprising town lay their heads together. Something must be done to bring money to Spokane. But what? Brilliant idea: the miners at Dawson City are starving—a capital opportunity occurs to make outsiders believe that Spokane is within a few minutes' stroll from the Klondyke goldfields. So it is proposed to send relief to the famine-stricken Yukoners. There is really no expense attached to such a proposal, and only think of the value of the advertisement! Spokane will then forthwith take rank as an outfitting and starting point for the goldfields, and no one will of course ever be so foolish as to make awkward enquiries regarding distance conditions or travel facilities therefrom, nor hint that there is a certain amount of circumspection necessary to evade the Canadian Customs officers at the British Columbian frontiers. Meanwhile the four carloads of flour, bacon and beans which the Spokane Chamber of Commerce have so charitably designed shall feed the poor famine-stricken population of desolate Dawson are to be carried by rail and steamboat as far as Ashcroft and then by waggon to Quesnelle, by sleigh to Teslin, and ho, for Klondyke, by dog train. But if the people of Ashcroft are wise in their generation they will quietly and without any foolish or ostentatious display accept the fortune thus munificently bestowed by providence, and divide those four carloads of flour, bacon and beans upon its arrival among the deserving rich and influential members of the community. We submit that this suggestion is based on sound economic and utilitarian principles. It would be a pity if good food should go to waste, and we very much fear that even such products as flour, beans and bacon would not stand a journey that under the most favourable circumstances would occupy the better part of a year to perform, if possible at all. Of course, if there is a likelihood of a famine in Dawson the Christmas after next—well, perhaps.

We are glad to note that that irrepressible scribbler and inveterate boomster, Mr. P. A. O'Farrell, has

been called somewhat severely to book on account of the grossly exaggerated and utterly unreliable articles on the Boundary Creek district from his pen that have appeared recently in some of the leading papers of the Dominion—among others the *Toronto Globe*. His critic—a reputable and well-known provincial journalist—who has been for some time a resident of Greenwood and now acts as the regular correspondent from Boundary Creek of the *Vancouver News-Advertiser*, is deserving of the gratitude of the community for the stand he has taken in the matter and we join with him in deploring that respectable and influential journals can be found to publish statements so obviously untrue and therefore injurious as those for which in this case Mr. O'Farrell is responsible. The time has come when editors of newspapers having any regard for the reputations of their publications must take steps to guard against the methods employed by a class of correspondents in this province of booming certain districts, mines or mineral claims with the ulterior object of putting money in their own pockets. We have it on good authority that a gentleman of this class who has a correspondence agency for a number of newspapers, is actually in the habit of demanding shares from British Columbia mining corporations as remuneration for his services in booming their properties in his press articles! Comment here is needless.

Exceedingly *apropos* is the following comment taken from an Australian paper of recent date, referring to the bad odour into which the Coolgardie goldfields have fallen in London:—

“Because some mines, saddled with enormous purchase prices, did not take rank upon the dividend paying lists, the whole field was condemned. Our good mines, where solid work was being steadily pushed on, were ignored. The finger of scorn and derision was pointed at our failures, which thus appeared colossal. To such an extent has this been done, that the very name of this town became a by-word. One had but to mention Coolgardie to condemn a mine. Yet where was the justification for all this? Because there were some costly failures, was it fair to condemn the others? In most cases, the very cause of the failure was the absolute incompetency of the London directors. They knew nothing of the conditions which prevailed here. They sent out worthless machinery, they wasted thousands in ‘office expenses,’ but, worse than all, they shipped to this colony youths and striplings whom they called experts, but the community called fools. Thus, in spite of such monstrous mismanagement, in some instances amounting to actual dishonesty, the field has succeeded in even existing is proof of its intrinsic worth.”

What has been the bane of Westralia threatens also to become the bane of British Columbia. Over capitalization, incompetent boards of guinea pig directors, promoting swindles, and bad management are

causes that would contribute to the damming of the richest field ever discovered. Strangely enough in company mining ventures it is the failures that are emphasized, and the successes that are but little spoken of. This is in rather striking contrast to the notoriety accorded individual effort in a country such as the Yukon, where instances of success are boomed and exaggerated and the many more numerous cases of distress, hardship and failure wrapt round about with the cloak of silence.

Elsewhere we publish a letter from Mr. R. Byron Johnson, President of the B.C. Development Association, in reply to the article by Mr. T. R. E. McInnes, headed “The Impassable Pass,” which appeared in our November issue. Mr. McInnes and Mr. Byron Johnson, we conceive, argue from two distinct standpoints; the former discusses what the White Pass trail was and is, and the latter what it will be. That a survey has recently been made of the route for a railway and that “the deepest gradient at any point is three per cent.” does not dispose of the fact that the original trail was built up hill and down dale for a great part of its distance. It will further be noticed that in his letter Mr. Johnson rather modifies the statement he is reported to have made to the shareholders of his company, with regard to governmental assistance. He now only “understands that the Government have invited tenders for a waggon road.” We haven't heard yet that any such thing has been done. As to the Stickeen route, it may briefly be stated that Mr. Johnson's remarks on the navigability of the river do not tally with those of Mr. Cyr, the Government surveyor. But even so, it is an easy matter to build an excellent trail through the level country a few miles to the southward of the Stickeen River to make this route strictly an “all-Canadian” one. However, very little of this is to the point. There will undoubtedly and perhaps regrettably be an extraordinary rush Yukonwards next spring and likely enough gold-seekers will crowd in over all known routes. It is therefore only to be hoped that Mr. Byron Johnson is not deceived in believing the White Pass passable.

The article we published last month on “The Location of Mineral Claims” by Mr. Carlyle, the Provincial Mineralogist, has attracted much attention, and the writer has received numerous letters from mining men throughout the province endorsing his views. It is further proposed that the annual assessment work of \$100 must be performed in each calendar year (January 1st to December 31st) succeeding that in which the location was made, until the Crown grant is obtained. Hence in the year of location only the “discovery” work within at least ninety days after the date of location shall be imperative. This would, it is thought, generally simplify matters in addition to

putting a stop to the wildcat practice of "staking claims on snow" in winter months which is frequently enough done.

An experienced traveller, just returned from Yukon, describes to an English contemporary a remedy that will effectually cure the Klondyke fever. "Pick out a morning this winter," he says, "when the mercury is below zero, shoulder a pick and go into the woods before breakfast; dig a hole sixteen feet deep; come back to the house at night and eat a small piece of stewed buffalo robe and sleep in the woodshed. Repeat the dose as often as necessary."

We have been the humble means of causing a "considerable sensation" in Revelstoke, at least the *Herald* published at that place informs us that such is the case. Our contemporary alludes to the article which appeared in the December issue of the RECORD calling attention to the disreputable method adopted by presumably the directors of the Gold Fields of British Columbia, Limited, to float the Tangier mine on the English market by dispatching to British householders post-cards whereon was printed an utterly untrue statement with regard to the richness of the property adjoining the Tangier—the Waverley—it being further alleged that this information was supplied by a Mr. Nagle, erstwhile Mining Recorder at Golden, and published in the *Rossland Miner* of September 9th, 1897. Thereanent the Revelstoke *Herald* comments as follows:—

"Now, there is little doubt that 'J. Nagle' is intended for Mr. G. B. Nagle, who is generally known as 'Jerry' and who once was Mining Recorder not at Golden but in Ainsworth. No other mining man of the name of Nagle is known to have ever been in the Kootenay, except a Montana prospector named Dave Nagle, who was in the district some three years ago, and then only for a short time. It may be taken for granted that Mr. G. B. Nagle of this place is meant, and a *Herald* representative interviewed him on this interesting post-card. In the first place Mr. Nagle had not 'recently visited' the mine last September. He has never been there since a year ago last August. When he visited the Waverley at that time there was a hundred dollars' worth of assessment work done on it, and nothing in sight except a good prospect. Mr. Nagle does not consider it 'one of the bonanza mines in British Columbia.' He never saw more than a prospect there, and his opinion about the company and the post-card is the very reverse of complimentary. The statement accredited to him by the gentlemanly informant of the *Rossland Miner* with such a large experience of mines in the country is a fabrication. The strictures of the MINING RECORD on Mr. Nagle and its condonation of the folly of the *Rossland Miner* in publishing such absurdities, should be reversed. Mr. Nagle is in nowise to blame and the *Miner* distinctly is."

We are glad to receive this confirmation of the general correctness of our remarks, but is not our

Revelstoke contemporary just a little unfair in the concluding paragraphs quoted? We made no attempt to condone the mistake of the *Rossland Miner* in publishing the absurd statements with regard to the Waverley, but expressed the opinion that its editor would regret with us that so glaring a falsehood had appeared in his columns. Moreover, our strictures, it will be admitted, on the "Mr. J. Nagle" of the post-card were perfectly just. It has since been learnt that, like the late lamented Mrs. 'Arris, there is no such "pusson."

It seems to us that both the Dominion and Provincial Governments have the strongest grounds for instituting criminal libel proceedings against the directors of more than one of the recently floated Klondyke-London promotions. Indeed, the honour of Canada is at issue. Sir Charles Tupper's assertions that his company, the Klondyke Mining, Trading and Transport Corporation, was to receive the active support of both governments was dubious enough, but here was merely an implication. The chairman of the Klondyke, Yukon and Stewart Pioneers, Limited, does not deal in hints. He is evidently a gentleman who has the true British regard for a plain statement, and he wants shareholders and the world in general to know that everything with which he has to do is fair, square and above-board. So at the general meeting in London on the first of the month the shareholders of this company are informed by the conscientious and hard-working chairman that he has had the pleasure of meeting "more than one of the Ministers of the Dominion Parliament" and that he has "their assurance that they will do everything in their power to promote and facilitate the company's operations." "This," he continues, "you may not look upon as of much consequence, but I can assure you it is of the greatest importance, for *politics in Canada and politics in this country are very different*, and those of you who have had the opportunity of studying this matter from personal observation will endorse my views readily. Col. Domville, our managing director on the other side, is member for King's County, has been a prominent politician all his life, and, being a loyal and devoted supporter of the present Cabinet, we are more than favourably situated to avail ourselves of the influence his position commands." The question is how long are the people of Canada going to tolerate this sort of thing? Political corruption in the United States has long been a bye-word for scorn among Canadians. Is it possible that the allegorical beam exists in our own eyes and has blinded us to the national shortcomings in this respect? It would appear so if these scandalous insinuations are allowed to go unchallenged.

If as stated, there are now advertised officially nineteen different notices of intention to apply to the

Dominion Parliament for Yukon railroad charters, it should surely prove needless to offer a state subsidy to any one of the embryo companies. They clearly deem the Yukon an exceptionally advantageous new field for railroad effort, so keen is their competition for the necessary enabling charter. Indeed it would almost seem as if one or other of the promoting organizations might without much pressure be induced to offer valuable concessions to the state or the travelling community in return for the grant of a charter.

The British investor and British Columbian interested in the satisfactory development of the province's precious metal mining must, we fear, prepare for more doubtful promotions, heavily laden with underwriting, organizing and other intermediary profits. Several limited liability companies have lately been registered in London, Eng., under the miserably inadequate capital of £100, with the declared object of mining in the Illecillewaet and other districts of British Columbia. These negotiations doubtless mean mischief and are as it were the eggs from which some large and unwholesome incubations will shortly result.

HOW REPORTS ARE WRITTEN.

THE CHARLESTON MINING CO., LD.

THE recently issued prospectus of this company furnishes another illustration of the slipshod way in which some men—who imagine their fitness to be vouched for by a huge affix of initials—write reports on mining properties which are offered to the investing public. In dealing with the marketing of the ore, the "expert"—whose report is reproduced in the prospectus—gives the cost as follows:—

Mining	\$ 5.00
Delivery to station	1.75
Freight to Kaslo	3.00
Smelting	9.00
Sampling	1.25
Sacking and sewing	1.50

\$21.50

"and with extras and office expenses, \$22.00."

He assumes the ore to have a gross value of \$100 per ton and then goes on to say: "This leaves a most handsome profit of seventy-eight (78) dollars a ton." Would this Mem. Inst. Min. and Metal., Mem. Fed. Inst. Eng. Prs. B.C. Assoc. Min. Eng. kindly condescend to give a little more information to the public so that they may really understand how this remarkable result is reached? Would he tell us if there is a smelter at Kaslo, and how he intends to dispose of the silver and lead that may be obtained from the Charleston ore? It is generally believed, by those not "in the know," that the ore would have to be sent to one of the U.S.A. smelters and would have to pay, at least, \$9.00 a ton freight after leaving Kaslo and \$15 a ton duty. Besides, there is a little item of \$1.00 per ton for taxes which appears to have escaped the writer's attention. If these three items should properly be charged against the ore the profit per ton

would not be \$78, but \$53. Surely it is not too much to ask the directors of the Charleston Mining Company to instruct their "expert" to explain the apparent discrepancy. Perhaps it is proposed to ship the ore to the same market as was contemplated by the "expert," whose names adorn the prospectus of the Galena Mines, Ltd., for they omitted any charge for duty from their estimates of cost.

All men are supposed to be expert at the business in which they have been properly trained. How those only who profess to know something about mines are accorded the flattering distinction of "experts" is somewhat puzzling in view of the reports like that above referred to. Expert bunglers or expert—is perhaps the euphemistic innuendo. ENQUIRER.

NOTES ON THE CYANIDE PROCESS.

BY W. PELLEW-HARVEY, F.C.S., M.F.I., M.E.

The Cyanide Process.

This is a term familiar to the readers of newspapers and mining journals, but to many the true meaning of the phrase is not clear. It will be the endeavour of the writer to explain what the process is, and what can be accomplished by its use, in such language that all may understand. The principle of the process depends upon the fact that in a fine state of division gold is readily attacked and dissolved by extremely dilute solutions of potassium cyanide, after which this gold-bearing solution is drained off the ore and treated to recover the gold in its metallic form. This is done by passing this solution over fine zinc shavings upon which the gold is precipitated as a black or brown powder which is then collected, cleaned, refined and run into bars. One peculiarity of the process is that the ore thus treated does not show any alteration in its appearance after the gold has been removed. It may be better understood by a comparison with acid solvents. If you take a cube of common iron pyrites containing gold and silver, and wish to remove these metals by the use of acids, the cube, on account of the action of the acids, will gradually disappear, the constituent parts of the mineral or the iron, gold and silver but not the sulphur, dissolving into the solution, but when ore or pyrites are treated by the cyanide the gold and silver alone enter into the solution, the baser metals not being attacked, and such a cube will be left bright and unaltered in appearance. The next question to be considered is what this strange salt can do for the benefit of the mining community.

Commercial Use.

Where low grade ores exist and economic treatment is necessary for the recovery of the precious metals contained, also residues of milling operations, such as tailings and concentrates, the process is now very often extensively used. In South Africa the introduction of this simple method under discussion has proved of permanent benefit and has caused great advancement in the mining industry. In the United States of America it is extensively used, also in Australia, New Zealand, and in fact everywhere where mining is carried on, while in Canada, too, the process is now being introduced.

Preliminary Work.

It will be necessary before treating an ore on a large scale to ascertain: (a) The amount of acid in the ore; (b) the amount of cyanide that each ton of material will consume; (c) the fineness to which the ore must be

crushed to give the best extraction; (d) the length of time best adapted for the complete removal of the metals sought. It will be gathered from the above that the process is varied according to the composition of the material under treatment. The costs vary according to the amount of potassium cyanide used, and the necessary preliminary work to prepare this solvent, or rather to raise it to the standard necessary for economic treatment. Some ores require more cyanide than others, on account of the presence of interfering salts which re-act on the solvent and decompose it, necessitating a renewal to compensate for that so decomposed, as it must be understood that although weak solutions act best, yet the standard or strength of the solution has to be maintained or the minimum point will be reached when the cyanide will not be able to do its work. Again the cost of labour is a matter for deep consideration, and also the percentage of gold that can be removed. In my laboratory work and dealing with the cost and use of the process as it may be adapted to British Columbia and other Canadian ores, I find that the process works remarkably well at a nominal cost. My experiments have been made on ores from all over the country and prove that as soon as the mines are properly developed, the cyanide process is sure to be used, if not alone, then as an accessory to the stamp mill and amalgamation.

Refractory Ores. The refractory gold-bearing ores of the Cariboo district yield, on an average, ninety-one per cent. of their values to direct cyanidation. The ores of the Nelson district, which are fairly free milling, give up by amalgamation and cyanidation combined from eighty-six to eighty-nine per cent. of their assay value. The Fairview Camp ores in some cases can be handled by direct cyanidation after dry crushing, and will yield eighty-five per cent. of their values, while by amalgamation first and the after treatment of tailings by cyanidation a better return can be made. East Kootenaw low grade ores can be treated so as to yield a good per centage, and in fact to such quartz ores as contain gold and silver with quartz and iron pyrites, either iron or arsenical, I have found that the process is applicable. The average consumption of cyanide has been 1.25 pounds per ton of ore treated, and the time of treatment from sixty to seventy-two hours, the yields varying as shown.

Trail Creek Ores. I have made a good many experiments with these sulphur ores (those with under two per cent. copper, and about five pennyweights gold per ton, and one to two ounces of silver). I have found that with a thirty-mesh screen and ninety hours' treatment and cyanide consumption of three pounds that eighty to eighty-five per cent. of gold values and sixty per cent. of the silver are recovered. By finer crushing and removal of slimes by amalgamation and cyanidation I have recovered as much as ninety per cent. of the gold. It is yet a problem whether or not any solvent process will be found as applicable to the treatment of these ores as smelting (should smelting rates ever become low enough for such low grade ores) as the smelting companies recover and pay for ninety-eight per cent. of the gold and ninety-five per cent. of the silver and all of the copper less 1.3 per cent. of the assay value. Without referring to what has been done in Eastern Canada where the Rainy Lake ores are being treated after stamp milling by

this process, I find that for ores the average cost per ton of treatment is \$2.00, the maximum being \$3.50, with cyanide at twenty-five cents per pound and labour at \$2.75 to \$3.50 per day.

Practical Work.

If the ore is applicable to direct cyaniding, dry crushing is adopted, but on the other hand, if a combined process is necessary, as in the case where coarse gold is present, then the usual stamp battery is used. The former or dry crushing by rolls, makes the most even pulp for treatment, as less slimes are found and leaching is naturally more rapid, because the ore lies more loosely in the vats and the solution can more readily percolate through it. The crushed ore or tailings ready for cyanidation are introduced into a vat made of wood or steel, with a false bottom about 1.5 inches above the true bottom, upon which canvas used as a filter is placed; then the solvent made up to the standard strength, usually two-tenths of one per cent. made by dissolving given weights of potassium cyanide in measured quantities of water, is introduced at the bottom by means of pipes and allowed to percolate upwards through the ore until a few inches above it. This solution is allowed to stand thereon for a few hours, when it is drawn off and a fresh solution is introduced and remains for the required time, in all about seventy-two hours. This now gold-bearing solution is then conveyed through discharge pipes into a box in which are zinc shavings arranged sectionally, and on this zinc the gold in the liquid is precipitated, the solution, now deprived of its gold, passing off into sumps to be again used after being made up to the original standard and strength by adding more cyanide. When this solution has been drawn off with the assistance of vacuum or suction pumps, a weak solution is sprinkled on to the now once-leached ore to be drawn through as a wash and also passed over zinc shavings. Finally a water wash is given to remove any trace of gold cyanide that may remain associated with the ores in the vats. The ore which should now be free from nearly all traces of gold and from sixty to seventy per cent. of the silver is now discharged from the vats in some cases by sluicing and in others by filling into trucks, as circumstances permit, and the vats are ready for a fresh charge. The solutions which have previously done duty are again used, after sufficient potassium cyanide has been added to bring the liquid up to the proper percentage or strength as cyanide has been decomposed and absorbed by the first use of the same. With regard to the time of leaching, this depends a great deal upon the state in which the gold exists in the ore. It is generally conceded that gold exists in the material always as metallic gold, but in some ores in much finer subdivisions than in others. When the subdivision is very fine, the cyanide more readily dissolves the gold than in those cases where the yellow metal is coarse. This is obvious, for if we take a lump of sugar, we expect a small lump to dissolve in a liquid much more quickly than a large one; the cyanide will dissolve the coarse gold (which should have been first extracted by amalgamation) but only after so long a duration of leaching as would be fatal to economical working. With regard to the amount of labour required, this is nominal. At the Waihi mines in New Zealand, with sixty heads of stamps dropping the whole labour required in the cyanide department is two men and one boy per shift. I have briefly described the percolation process; in

some cases agitation of the mass while leaching is necessary. This simply means the stirring up of the ore and solution, when more cyanide is consumed, more labour is necessary, and more machinery too, but the treatment is completed in twenty-four hours, as against seventy-two.

This varies according to the cost of **Cost of Plant.** labour and machinery. A plant capable of treating about twenty tons of tailings daily, would cost, approximately, \$1,300, without buildings and crushing machinery; with erection and necessary sheds and grading, it may be reckoned that the total cost would be about \$3,500. It is my opinion that upon the development of the mines of this province the time is not far distant when we shall be able to witness the successful operation of many cyanide plants in British Columbia.

THE ASSAYING OF ROSSLAND ORES.

H. E. D. MERRY, A.R.S.M.

(Late assistant manager to H. H. Vivian & Co., Ltd., Swansea.)

IN accordance with editorial request I subjoin an article on the assaying of Rossland ores that may be useful, not because these ores are hard to deal with, but simply from the fact that in most colleges of science and schools of mines the professors, for some reason, still cling to the old method of roasting all base ores before fusing, which, while being a very slow process, is just as likely as not to be inaccurate. Whatever method of roasting is used, there is a small loss of ore chiefly by the "fluffing" of the finely powdered particles. In addition, the method is far too slow and tedious for any assay office where a large number of samples have to be assayed daily by one man and one muffle furnace.

The Rossland ores being chiefly low grade, the crucible assay at once recommends itself to the assayer, and where in some few cases half an assay ton is too small a quantity of ore to take for assay, it will be found in ninety-nine cases out of one hundred to be a sufficient quantity. From the fact that base ores not containing more than \$2.00 in gold per ton are valueless as far as gold is concerned, and as this article is to be entirely on the assaying of base gold ores in Rossland, we will take half an assay ton as an amount of ore suitable for testing.

The ores of Rossland are chiefly pyrrhotite with a diorite "gangue," although we find in some places iron pyrites, morcasite, chalcopyrite, mispickel and magnetite, a little quartz and calcespar sometimes intermixed.

The ore sample having been reduced to a pulp—so as to pass through 100-mesh sieve—the finer the better, as even in these base ores we have free gold present—and carefully mixed, the next idea is to obtain fluxes that will assist in the perfect fusion of the ore, and produce a lead button while not too large for a cupel one and a quarter inches in diameter, still large enough to collect all the gold contained in the ore, a button weighing about twelve grammes will be sufficient.

I have found it most convenient to keep on hand the following mixture, which, with very little alteration, is suitable for all ores that may be assayed for gold, viz., 6 lbs. soda bi-carb., 4 lbs. litharge, 2 lbs. borax glass, or for those who prefer using borax powder to borax glass on account of its being so much cheaper, the following, which was given me by Mr. C. C. Woodhouse, jr., is equally as good and

decidedly cheaper, viz., 6 lbs. soda bi-carb., 4 lbs. 13 oz. litharge, 3 lbs. powered borax. Use a 20-gramme crucible (Battersea B soft recommended) and for each assay use half an assay ton of ore and about two assay tons of mixture. Add nitre and silica according to the amount of "kies" present, or flour if there is too little sulphur present to produce a sufficiently large lead button; mix well in the crucible with a spatula, and when mixed add three 20-penny nails and a light cover of borax glass.

Fuse in a good strong heat for about thirty-five minutes and pour, when, if the right quantity of nitre has been added and sufficient heat given, a clean malleable lead button free from matte will be obtained. I have never found it necessary to use more than twenty grammes of nitre or twenty grammes of silica.

In some cases it will not be necessary to add either nitre or flour, but merely nails, to obtain this button; when using flour always add one or two nails as a safeguard.

The button having been hammered free from slag it is cupelled in the ordinary way with an addition of pure silver, which assists in collecting the gold and ensures the "parting" being complete.

I may add that the Rossland ores are very little different from an assayer's point of view to other base ores, but the system used by the western assayers in my opinion, if properly and carefully conducted, is more accurate and more speedy than the method generally employed in the East and in England, and enables a man to get through from forty to fifty assays per day in one furnace with a muffle 9x15 inches or 10x16 inches, where a man who roasted his ores before fusion would not get through half that quantity.



MR. JOHN O. NORBOM, E.M.

Mr. John O. Norbom, E.M., superintendent of the mining department of the British Columbia Iron Works, Vancouver, is a graduate of the Royal Technical Academy at Horten Navy Yard, Norway. He has spent some twelve years in the West and visited all the principal mining centres of the Western States and Mexico, being engaged as consulting engineer by several of the most prominent mining corporations operating in California. Mr. Norbom has designed among other classes of machinery an improved ore concentrator for which he has secured a Canadian patent. He also designed the 1,000 horse-power triple expansion engines of the S.F. & S.M. Electric Railway.

THE DEVELOPMENT OF PROSPECTS.

An engineer working in this country is confronted at the outset with the fact that he cannot in the ordinary course of events be asked to examine proved mines. To a great extent therefore his work will be with regard to the geological and speculative. At the same time he cannot afford to neglect these opportunities even though it may seem sometimes like taking fees for little work. He will soon find that much can be done to prevent the owners or prospective owners investing their capital wrongly. I have in mind a case where an engineer when asked to examine a certain property declined, saying the fee he would have to ask would be out of proportion to the value of the report, and the owner had better do some development work on the claim first. Six months after he was asked again to examine the same property and found to his dismay that some \$3,000 had been really wasted, the result of the expenditure being practically *nil*, although the ground was such that advantageous work might have been performed.

While on this subject it might be well to draw attention to the enormous expenditure of money now going on in this province by prospectors which money is absolutely thrown away. Any engineer in the Western States can tell of tunnels hundreds of feet long, deep shafts and prospect holes by the thousand put down by the unaided labour of the prospector and representing in the aggregate not thousands but millions of dollars. In many cases the prospector is firmly convinced that he has the finest copper—gold—silver—lead—proposition in the country, and although to the unprejudiced eye it may look merely like mineralized country rock he is confident the vein or ledge is clearly defined.

It cannot be denied that there have been cases when this unremitting toil and bull-dog tenacity of purpose has had its reward and instances are still quoted of So-and-so's luck in a rich strike, but in most cases these have been made through finding another vein to that he was following, which did not

appear on the surface. This therefore does not invalidate the argument.

THE QUESTION OF INCREASED VALUE WITH DEPTH.

His main cry is: "Well, we're getting assays of a trace of gold, but it is only surface. Presumably when depth is obtained much richer results will follow." When or how this cry arose I fail to see; I am open for conviction, but in my knowledge of mines extending over some years, I cannot call to mind a persistent increase of value from depth.

This does by no means preclude the fact that a rich chute of pay ore may be found at some point at a level or crossing the shaft, which chute may incline to the plane of the vein at any angle. As a matter of fact the reverse has been and is the rule and with the exception of the Grass Valley district of California I do not know of a camp where as a whole the gold values more than hold their own.

It must be understood that in speaking of "depth" I mean points at any rate five hundred or six hundred feet from the surface. The fact of the richer oxidized minerals playing out and sulphides coming in may not alter the total value by fire assay, though it may greatly alter the value of the mine as a dividend payer.

In a country where glacial action has been so violent and long sustained as British Columbia and where in consequence the upper zones have been largely denuded, carbonate or oxidized ores are rare. There are nowhere visible

such gossans as occur in Mexico, South America, and Spain, of a hundred feet deep, and it would be well for owners and buyers to reflect that the present surface represents a portion of the vein perhaps two or three thousand feet below the original surface. Why, therefore, nature having done so much, should we assume that on sinking our little hundred feet we are going to get such an alteration of the mineral values?

This glacial appearance is also largely the cause of our rich "placers," and though I would not for a moment deter any one from the proper exploitation



THE HON. T. R. M'INNES—RECENTLY APPOINTED LIEUTENANT-GOVERNOR OF BRITISH COLUMBIA.

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of reasonable prospects, this fact should be borne in mind. In considering the proper value as a lasting goldfield of the newly discovered Klondyke area let us think of the number of tons of assumed quartz which will have been crushed, milled and concentrated by the action of this gigantic force. Let us take our own Cariboo field for instance. I believe I am correct in stating that there has not as yet been discovered any quartz that would pay for mining and milling in large quantities and yet we have there all the conditions one would think for finding valuable lode mines, rich placers located at the heads of small streams and with the quartz in the kindly country rock on each side. It need not be very rich quartz to make a rich placer if one considers the millions of tons of rock eroded, milled and ground sluiced by glacial and water action.

A block of quartz worth \$2.50 a ton a thousand feet long by a thousand feet deep and five feet wide would represent a gold value of rather more than one million dollars. The erosion has certainly been more than that, and I have much reason to know that much of the quartz is richer. W.



MR. ALFRED W. DYER, ROSSLAND.

Mr. Alfred W. Dyer, our Rossland correspondent, is a journalist of some note. He resided for many years in the Orient, and occupied important positions on leading newspapers in India, China and Japan.

THE KLONDYKE RUSH—A PROBLEM.

WHILE not wishing in any way to damp the hopes of British Columbians in the direction of the benefits they will and must derive from the influx to the Klondyke, it would be well to look the facts in the face.

What are these facts? A river has been discovered, which, with some of its branches, is highly auriferous and from whence gold has already been taken out to the value of two or three million dollars. It is stated that all this length of river and creeks is located as claims.

What guarantee have we or what previous knowledge can we bring forward to enable us to assume that other streams as rich will be discovered. Let us reason by analogy: Williams Creek, Lightning, Antler, Cunningham and other rich creeks have so far

as known at present been richer per mile of length and produced more gold than the Klondyke and have with one exception (Alder Gulch, Montana) been perhaps the richest streams ever discovered.

All these creeks are within a short distance of one another and head practically in the same mountain. Let us assume Alaskan distances and ask ourselves what gold was discovered in the Blackwater and Nechaco Rivers, South and North Forks of the Fraser, North Thompson, Clearwater, etc.?

Of course it may be said with truth that much of this area is overlain with basaltic and lava flows which have covered up what may be wealthy ground but the main statement holds good and while I am firmly convinced that the Alaskan and Northwest goldfields will produce a large amount of gold, we must look at these things from a common sense point of view. If half one reads turns out to be true we may expect in the spring a tremendous rush of people, half, nay four-fifths of whom have never handled a pick or shovel, never packed fifty pounds on their backs, put two hundred pounds on a cayuse, cooked the lively but indigestible flapjack, and to whom as yet beans and bacon is an unknown luxury. What will happen to these people in the inhospitable north? Probably only a half of them will reach Dawson City and of that moiety numbers will not be able or willing to reach the outlying fields of exploration.

It is very doubtful if work can be found for many up there. The result will be that British Columbia will have to find labour, clothes and food for the remainder who have not money to go further or to return. We shall be overrun with workmen of, at first, an undesirable class. Thank goodness our country is rich and big enough to help those who can or will help themselves and I look forward to great benefits to be derived from the eventual settling down of many of these people.

Australia went through very much the same period some years ago with thousands of men clamouring for food, the government being compelled to find them work. We shall have to stand the same strain. It is not my wish to be pessimistic, yet I cannot but see that much over inflation has been and is taking place and I would wish rather to take the position of *advocatus diaboli*. The less one expects the less one is disappointed.

Judging from the experience of other mining camps and countries I can see no valid reason for this great expectation. We must remember that there have been miners and prospectors to the manner born in the Yukon and Cassiar districts for many years. Are we to suppose that they have spent all their time around the camp fire? If I know anything of the western prospector I should reply emphatically no.

The fact of the Klondyke diggings being some distance below the surface and that surface a frozen one has, perhaps, prevented their being discovered earlier but the average western prospector does not leave many chances behind him.

From the point of view of a shareholder in a company proposing to operate in the Klondyke and wishing for a return on his money from legitimate mining I can see still less hope. Are we to suppose that a miner owning a claim in the Klondyke and being convinced that it contains so many million dollars of gold dust will sell for much less than his estimated value? Will a company work the ground any cheaper than he could do it? I think not.

Putting aside a question as to a prospector's statement being accurate, and this is not always the case, the value of a drift mine is always a very problematical one. I hear on the best authority that the ground on the so far discovered rich creeks is spotted and patchy in its gold contents.

Hydraulic mining must be, it seems to me, almost impossible, unless boiling water is used! Quartz is as yet practically undiscovered and there is really no reason why if found it should prove rich enough for working; instances of there being rich placers without workable quartz are not unknown, as will be seen elsewhere in this paper.

It is highly probable that the Klondyke gold is directly due to glacial action and is contained in moraines and fans which cross the present valley at certain points and it is at or immediately below these points that the ground is rich. There is now little doubt that gold in streams or gravels will grow. That is to say, it forms of itself a nucleus for other gold held in solution in the water to be deposited on. Water rich in organic and vegetable matter is known to have the power of dissolving gold to a certain extent and it is by no means certain that gold is not contained in some minerals as a sulphide, though this is hard to prove. W.

OUR LONDON LETTER.

SPECULATORS in Great Britain appear almost afraid to invest in British Columbian mines. The reason is simple, for until some responsible surety is given, official or otherwise, it is unlikely that the bidding for shares will advance at any appreciable rate. Many of us (I speak for my neighbours and will make no confession of my own!) have burnt our fingers over companies in West Australia, where I have been assured by one who held a responsible position out there, that there is scarcely enough gold dust in many of the companies' lots to cover the glasses of a pair of spectacles. Rhodesia has also made an investor a wiser if not a richer or sweeter tempered man; and an informant, well acquainted with the district, says that the confidence of the people will continue only so long as Mr. Rhodes is himself at the helm. Little wonder is it, then, that the temperature of capitalists exceeds a hundred when rumours are repeated that the Colossus of South Africa is dead. These reports always possess a semblance of truth, because it is pretty generally expected that Mr. Rhodes will make his final bow on this world's stage somewhat suddenly, as he is working at such a high pressure. He himself seems to be aware of this, for he told a friend, "If you hear the story that I am ill or dead, don't believe the story until confirmed by myself," or words to that effect. At any rate he will require an astral body to write his death certificate! But joking apart, South Africa treads upon a serious balance, placing as it does all its eggs of confidence in Mr. Rhodes' market basket.

THE LATEST ACCOUNTS FROM JOHANNESBURG.

Even now the latest accounts from Johannesburg are appalling. In this city, based on the foundations of finance, ten thousand people, educated and otherwise, are absolutely starving and gambling and lawlessness are rife. "Trade is paralyzed, business at a standstill," writes a correspondent. Mines are closing down daily, and many of the most prominent are just 'keeping the fires burning'. In Buluwayo, to

which place the railway has been opened with a fanfare of trumpets, the same congestion exists, so that neither place offers a glowing picture of prosperity.

It is of importance to note all these signs, not with the eye of the Levite or priest, but as a warning to the province, which is just now realizing its own strength and resources. This strength it is our earnest wish should not be misapplied. At the same time British Columbia must be ready to pull herself together for honest work, when her older brethren are sharing a period of adversity. The British public for a time will be shy of "planking down" on Australians and South Africans, and will be the more disposed to examine the map of the district of Klondyke.

THE KLONDYKE HEGIRA.

I doubt if there ever before lay so grand an opportunity for the Dominion's westernmost state. The name of Klondyke is dinned into our ears every day and when any over energetic individual steps upon the scene of public life, "send him to Klondyke" becomes a passing joke.

For instance, the following is an advertisement frequently inserted in one of the London dailies:—

KLONDYKE—A berth for sale in the best equipped expedition leaving England. There and back at end of the season to Vancouver and provides everything.

It is a little ambiguous, but then that is a penalty on sufferance for terseness. Still I continue in doubt, whether the berth is intended to leave England without the purchaser, or whether if the man does go as a passenger, he is only able to return as far as Vancouver. Ah! It is clear enough now. Vancouver wants an increase of population, and so entices fortune-seeking men to its streets, and then blandly says they must find their own fare back to England. By way of compensation the corporation of Vancouver will provide everything so long as the adventurers choose not to go home. The story reminds me of the journey of an explorer who travelled through Thibet and wished to march on to Peking; but, as soon as he reached the Chinese territory, the mandarin invited him as a guest. But when the traveller wanted to depart he was informed by his host that he could not go until a passport had been obtained from the capital. The traveller waited patiently for several days when he asked how soon the passport would be forthcoming; not for another twelve-month, was the suave reply. The delay was as bad as an impassable mountain, so the Englishman retraced his steps. Is Victoria going to vie with Vancouver in this Chinese generosity? If so I am afraid that I shall be travelling quickly westward ho!

At any rate, there will be plenty of travelling in the same direction as soon as the spring returns, though not with the same lazy purpose. The very thought of the rush to British Columbia produces an exhilarating effect in the Bourse at Berlin, for, on a day when everything else will be firm but quiet, Canadian Pacifics will rise in expectation.

MR. BOSCOWITZ ON CANADIAN ROUTES.

To commence with, we have been learning how to entertain one of your fellow-citizens. This week Mr. Joseph Boscowitz was the guest at the Savoy Hotel of Mr. Morris Cotton and the directors of the Klondyke and Columbian Goldfields. He made a humorous speech in which he declared that there was only one route to the golden north—and that was, of course, from Victoria to Dawson City. Was there

ever such a virtuous citizen as Mr. Joseph Boscowitz! Other routes were almost impassable, whilst already the White Pass was strewn with fifteen hundred carcasses of horses. It is a pity that there is no Saxon worship in Klondyke to Woden; there might be some chance then for some miner to gain a certain future by the immolation of these dead creatures. Once again the spirit of the true patriot showed itself in Mr. Boscowitz's speech when he remarked, triumphantly, "Avoid America" on the journey. Most of the accidents which had occurred to adventurers, he urged, were due to their own foolishness in choosing the wrong season for their enterprise. The Canadian Government proved a great foster father to those who needed facilities to reach the district of the Yukon region, the value of which was inestimable. He could pledge his faith that a pan of dirt had fetched a thousand dollars' worth of gold.

and that it only wanted capital and energy to reward enterprising men who went out there.

NEW ISSUES.

Two other companies during the last week have had their say in answer to Mr. Taylor's assurance that the Dominion was progressing. The first is called the Yukon Goldfields Company, which held its first ordinary general meeting under the supervision of Mr. A. Fell in the chair. He remarked that the company was registered on July 27th last, and within a week later their expedition had left Victoria for the gold fields of Yukon. Matters had been pushed forward so rapidly in consequence of the co-operation of the London and British Columbian Goldfields Company, who were really the originators of the Yukon Company. The board had every reason to believe that the expedition would be successfully accomplished in two or three weeks from the start. The



PRELIMINARY WORK ON THE ARGO, SANDON, B.C.

Already \$5,000,000 had been brought from Klondyke under adverse circumstances, which only served as an incentive to others to pick about for more. The guest of the evening wished to persuade England to help Canada to open up and maintain a highway to the greatest discovery the world has ever known. Vancouver Island teemed with gold, and so did other parts of Canada, and Mr. Boscowitz pressed upon England to help Canadians in the struggle against their neighbours. Sir H. Crooks, who succeeded the Victorian in the art of making speeches, stopped at no hyperboles, but with bared fist was ready to knock any one down who did not believe that after the placer gold had been removed tens and hundreds of millions of gold did not still exist in the quartz reefs beyond. Mr. J. W. Taylor seemed to speak too calmly after this delivery when he assured the company that the Dominion was making great progress,

capital called up amounted to £6,000 (\$30,000) only, but as soon as they received information of the acquisition of claims or of other business having been entered upon the shareholders would be called together to have the proposals of the board laid before them. The Chairman added that of all the English expeditions started to carry out operations, their company was the only one that had got an expedition through this winter.

The other company referred to was the Trust and Loan Co. of Canada, a general ordinary meeting of which was held under the chairmanship of Mr. Chas. Morrison. The report was a quiet one, though the board paid the same dividend, and were able to carry forward a slightly larger amount. This was on the whole regarded as a favourable result in consideration of the great difficulty which exists at the present time in lending money in the Dominion at a remun-

crative rate. Mr. Morrison was glad to inform his audience that the crop prospects had improved, so that the farmers would be in a better financial position than they had been for some time past. The properties were always valued at double the amount lent on them, as it was a fundamental point with the management of the company never to lend more than fifty per cent. of the value of the property. As a loss had been made on some of the properties taken over, the shareholders would realize what a very great depreciation had taken place in the value of properties in Canada.

But as there seems to be a good time coming for everybody in the Dominion, there is only one thing left for me to do before closing, and that is to wish the Victorians themselves a fair quota of that success.

NUMMUS.

TERMINAL CITY TOPICS.

THE MUSIC HALL QUESTION.

WHILST members of Vancouver's City Council and Board of Trade are keenly and in some cases angrily discussing the alleged need of a miner's "free and easy" music hall for the Terminal City, in order to attract a further working population to Vancouver, another need of the town—as to which there can be little question—passes almost unnoticed by the various authorities interested. It is clear that if there be anything like the expected spring and early summer rush of Yukon travel through Vancouver, the present hotel and general boarding accommodation of the city will, unless considerably supplemented in great haste, be found inadequate. Vancouver has too many saloons, too few travellers' hotels of a middle grade, and is thus rather unready to meet the expected influx. And as regards private houses capable of supplying boarding or residential accommodation either to Yukon emigrants *en route*, or to members—in some cases—of their families, the supply is already proving inadequate though the rush has not yet really begun. One result is considerable difficulty for settled residents in leasing new houses for themselves conveniently near the centre of Vancouver, when as in a number of cases finding it needful to make a change of abode at or about the beginning of the New Year.

LACK OF ADEQUATE HOUSE AND HOTEL ACCOMMODATION.

There is clearly present scope for a fair amount of house building within Vancouver's city limits, but for this the winter season is unfortunately none too convenient. An early rise of Vancouver house rental is, as a result of these things, very generally expected. The Yukon boom may of course burst ere the spring—the *Engineering and Mining Journal* thinks it will—but this seems scarcely likely, certain though it is that the immediate possibilities of far northern gold seeking are too generally held to be larger than they are.

THE C.P.R. AND THE TAX EXEMPTION BY-LAW

Directly connected with the development of Vancouver as a mining centre and also as a point of outfit and embarkation for Yukon travellers are the Canadian Pacific Railroad's plans of wharf, station and office building. The wharves will be enlarged without delay, in order to meet the increasing demand of steadily growing coast and ocean navigation. Plans are already being carried into effect as to these

wharves. But there is, in the view of the great railroad company's directorate, no absolute requirement for the immediate provision, at a cost of between \$300,000 and \$400,000, of a fine range of depot and office buildings on the harbour front. Hence the company has informed the Council and citizens of Vancouver that the terminal buildings will not be erected unless there be passed in its entirety a by-law for which Sir William Van Horne and his colleagues have asked. This must ensure not only the exemption for a period from municipal taxation of all C.P.R. property in Vancouver that is actually used for railway traffic and incidental purposes, but also assure all the company's property in Vancouver against liability to rating in respect of contribution towards any bonus that may for eight years to come be granted to any competing railroad company entering the Terminal City.

It is widely held in Vancouver that the latter condition cannot be conceded, though there is apparently not the slightest local desire to bonus any competing railroad—the disastrous failure of one such previous effort to induce competition and the costly litigation therewith connected having caused Vancouver's citizens to act on the adage "once bitten, twice shy." Hence there is every likelihood of a bitter by-law fight "for principle"—usually the keenest of contests—and in this there will be required if success is to be—even with difficulty—gained by the company, all the persuasive rhetoric, written and verbal, which the C.P.R. can command. At present the ratification of the by-law by the citizens seems to be unlikely, though the council will probably submit it to the necessary vote. The early expenditure of probably \$350,000 within the city—a considerable proportion of it representing the wages of local labour—will, it is true, prove a great inducement to many civic voters, but very large numbers are apparently irreconcilably hostile to the proposed by-law and its suggested restraint on future civic freedom of action in regard to other railroad encouragement.

THE TALK OF THE STREET.

The considerable enlargement that is about to be made at the British Columbia Iron Works in Vancouver with a view to meet a steadily increasing demand for home manufactured mining machinery is a satisfactory "sign of the times." Not so, however, the break—temporary or otherwise—in the negotiations for the proposed ore smelter and refinery on Burrard Inlet.

The chairman of the Klondyke, Yukon and Stewart River Pioneers, Limited, at the recent statutory meeting of the company in London made a most unfortunate declaration to the effect that the undertaking might naturally be expected to reap large advantage from the "political pull" of its Canadian director, Col. Domville, M.P. This kind of assertion must be negated by impartial administrative action on the part of the Dominion Government or the people of the United Kingdom will form a very bad opinion of Canadian statesmen and politicians.

DR. CARROLL AND THE GOLDEN CACHE.

The recent application made to the High Court by Dr. Carroll, as trustee of certain treasury stock in the Golden Cache, was one instituted on behalf of all the beneficiaries interested, the trustee naturally desiring to have the scope and duties of his trust judicially interpreted, in order strictly to conform to the

law, under circumstances involving as regards certain of the beneficiaries considerable conflict of interest.

The trustee's position in the matter has for the time being been made clear, but it is hinted as just possible that certain dissatisfied stockholders may, on their own behalf, seek in some way to obtain a judicial reconsideration of the decision. No really abstruse point of law or equity seems to be involved and it should not be difficult nor costly to obtain an absolutely final judgment on an issue, which has already been decided on an application to a court of first instances. Legal men believe that the judgment already given will be sustained if an appeal is made.

COAST MINING NOTES.

Mr. Pellew Harvey, Vancouver's well-known assayer, states, as a result of recent careful investigations made on behalf of Messrs. Vivian & Co., of Swansea, and others seeking estimates of ore values, that in his opinion the prospects of the better and more proven claims of the Mainland and Coast were never brighter than now. Especially is this the case of those that are being well worked for copper-gold.

There is considerable satisfaction evinced in Vancouver anent the resolve of the owners of the Van Anda mine on Texada Island to replace unskilled Mongol by capable white labour. The change is not only advisable from the general standpoint of social economics but in the interest of the development of the mine itself, which has, according to more than one expert, by no means benefitted in the past by the packing and showing of its ore deposits by a band of Chinamen, knowing little or nothing of precious metal mining.

Another mine in which Coast investors are much interested—the Providence on Harrison Lake—is also stated on expert testimony to be capable of yielding substantial profits, on condition that development work be conducted under efficient management and on a sufficient scale. The history of the mine—all recent—argues the necessity of this.

Good reports are now to hand as to the prospects of the Blue Bell mine on Frederick Arm in which Vancouver and British capitalists are largely interested. The ore bodies in the mine are stated by the consulting engineer, Mr. Pellew Harvey, to be showing up very well, and to further test these a trial shipment of a ton of ore will shortly be sent to a smelter on the Sound. Mr. Harvey is directly connected with the Vivians, of Swansea, but it will save time to send the trial shipment to the Sound and thus save a long sea voyage.

There are authentic reports here to hand of a very rich gold gravel discovery in the Skeena River district of Cassiar. Efforts are being made to interest British capital in the deposit which can, it is stated, be easily and cheaply worked by hydraulic mining. The find is at a considerable distance from the coast but can be reached by a trail not difficult to make. Cassiar is beginning to show advance signs of successful rivalry with the Yukon, if not for actual superfine richness of precious metal deposits, yet as regards their prospect of bulk, permanency and comparatively cheap and easy working during a far longer season of each year.

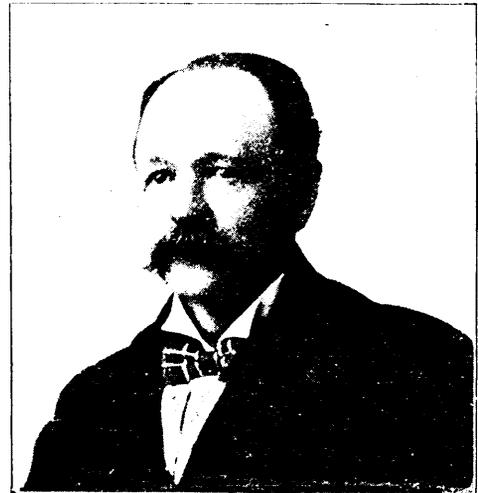
A TRICKY PROMOTER.

A PROPOS of the unscrupulousness of some London company promoters whereof effects have already been unhappily felt in this province a well-

known British Columbia mine operator recently returned from a visit to the great metropolis relates as follows: "Being one of the first to reach England after the news had been cabled of the arrival in Seattle of the steamship *Portland* with gold from Yukon on board to the value of \$700,000. I was for some days in great request on account, of course, of the special information I was in a position to give as having talked with the returned Yukon miners. Well, one day I was asked by a gentleman who followed the calling of a professional company promoter to arrange for the purchase of a claim in Klondyke for a company about to be or that had recently been incorporated in London. I forthwith consented, submitting terms by cable to a miner in Seattle who owned a rich property on El Dorado Creek. Negotiations, however, fell through, and I consequently notified my principal to the effect.

"Well," he said, 'can we acquire at less expense undeveloped claims in the same locality?' Yes, I thought we could. 'Very well; but how about reports? Can you furnish us with an engineer's report?' No, I explained, reports of this kind on Klondyke claims were, for obvious reasons, not at present obtainable. 'But you could get a report by miners other than the proprietors?' Yes, but I failed to see that this would be of value. 'You could get them to write M.E. after their names,' he remarked, suggestively. 'Why,' I said, 'you're dishonest. No wonder English investors are taken in when such men as you promote companies,'"

About the same time a so-called Klondyke enterprise was launched, the prospectus calling forth that the company had already acquired ten claims in Alberni. Of course very few in England have any geographical knowledge of this country or are aware that Alberni is not in Yukon. And so this wretched wild-cattling business goes on!



JOHN A. MANLY, FIRST MAYOR OF GRAND FORKS, B.C.

A RETROSPECT.

THROUGH CARIBOO THREE YEARS AGO.

THE tenderfoot carried by train from the midst of a country of rushing, roaring, boiling mountain streams where the horizon is narrowed by mountain peaks, clothed in eternal snow, finding himself dropped in the valley watered by the more or less

placidly flowing Thompson, draws a long breath, rejoicing in a newly found sense of freedom. At least, so it was with this particular pilgrim and his partner after spending eighteen months in the Kootenay mountains.

What pleasure there was in that "long look" at miles of valley and plains and rolling hills and bits of scenery through the gaps in the mountains.

You mountaineers don't know and can't understand the feeling a plains-bred man rejoices in when out on the wind-swept prairies again he fills his lungs with "God's glorious oxygen." It is good to "fork" a hardy bunch-grass-fed broncho and feel him sweeping along over the short, crisp grass and sage brush playfully reaching at his bridle, light on his feet as a ballet dancer. It is good to let out a yell for the very joy of living and to have the dry evening breeze blow back the laugh in your throat.

WE MAKE PREPARATIONS FOR THE START.

With what light hearts we set about making preparations for a prospecting tour through Cariboo. A pack horse and saddle bought, a former acquaintance with the "diamond hitch" renewed, and outfit packed, gaily we started, singing as we go "Climbing up the Cariboo Road."—I must tell you, though, that this trip was made more than three years ago.

For the first two or three miles it is climbing, but up a road smoother than any of your Victoria streets. Following the side hills to the west of the valley of the Bonaparte, in places these hills are vividly coloured with red and yellow stains and we promise ourselves to devote some days to investigation at a future date. Before, however, we did so, others had become interested, and now for miles the country is staked and the traveller can see from the road as he journeys the mouths of many tunnels, and neatly stacked sacks of ore awaiting shipment to smelters.

On we trudge through fields of ripening grain on one hand and on the other bands of sleek-skinned cattle and horses grazing on the bunch-grass growing on the side hills, until coming somewhat unexpectedly to the brow of a hill we look down upon the town of Clinton. From Clinton to the Chasm (thirteen miles) is a pretty steep up-hill pull. The Chasm is "one of those things no fellow can find out" about. It looks as if the outer crust of the earth becoming too heavy at this particular point, had fallen in until it found some support 500 or 600 feet lower down. Close by we met a fine fat buck. So suddenly did we come upon him grazing by the roadside, that for a moment I stood open-mouthed, before slipping my rifle from its case and giving him "one for luck." He made lovely *muck-a-muck*. From here on there is plenty of fresh meat—deer, rabbit, partridge, blue grouse and fool hen in plenty, and in the spring and fall ducks and geese.

A LONG TUNNEL.

We made haste slowly, fishing and shooting and conning the country as we journeyed, until we came to Horsefly, our first objective point, where we expected to see a hydraulic mine at work, but were disappointed, the pipe line not yet being completed. On Horsefly we found the old and new side by side. Old Bill (W. H. G.) Thompson has been driving a tunnel for the past nine years to tap a back channel (the old joke is to tap the 150-Mile House cellar). When last I saw him he hadn't got a dollar's worth of gold out, but he expected to strike it rich soon, and I, with

many others, not only hope, but think that he will.

Next comes Hobson's hydraulic, and farther up stream we find the real old thing on the old Harper lease. Three huge water-wheels, slowly revolving, drive as many gangs of Chinese pumps for the Aurora, Bluebird and Eureka Companies. They are cheerful sounds, that rush of the gravel as it tumbles into the dump box and the swish swash of the water and gravel on the rocker irons, but the sight of the riffles in the rocker blanket filled with bright yellow gold is more than cheering, and one feels the richer for being in such a country. I have seen prospects of \$1.00 per pan taken out of the ground. Last season it was worked by hydraulic elevators by the Horsefly Gold Mining Company, of San Francisco. They don't want to go to Klondyke. Having spent our allotted time on Horsefly we move on down Beaver Lake Valley.

THE FAMOUS "CARIBOO."

Being young and green, we prospected, found some gold and decided that this, too, would repay investigation. At the present time I know of more than twenty-five miles of this valley being staked off for companies from San Francisco, Victoria, Vancouver, Montreal and England. Leaving the valley near Guy's place we pass over Moorehead Mountain and the Fork Mountain to the South Fork claim, now known as the Cariboo Hydraulic. This mine was worked by Chinamen in Dancing Bill Gulch until it got too much for their limited powers to cope with. Then Mr. Hobson got it and equipped it. They have sixteen miles of canal and more to build; they turn out bricks of gold worth \$70,000 and \$80,000 dollars and seem to be dissatisfied if they don't get that much at every clean-up. Five miles up stream we hunted cariboo and caught mighty salmon trout where now a company is engaged in the playful task of damming back a lake seventy or eighty miles long for the love of the yellow metal hidden in the bed of its draining stream. On the north side of the river and a trifle below Dancing Bill, while resting on a bridge across Rose's Gulch, our cook told me, between swallows from a black bottle containing a powerful tonic, of a prospect which he had struck in the neighbourhood, lengthily explaining how he had been moved thereunto by inductive reasoning. With a show of interest I listened and thought how talkative that tonic made him. I was offered an interest for "almost nothing," which with the cautious wisdom of the pilgrim, I politely but firmly refused. The following year when I saw the nuggets he got out of his ground, \$10, \$20, \$30, \$40, and \$67 ones, I went outside and kicked myself hard. This property was lately married to a magnificent water right. In a couple of years the product should be immense.

While at the Forks we heard of the prospect found by Mr. Drummond, also of the finds at Beaver Mouth and on the French claim. Since then all these have been exploited and reported as promising wonderfully well for hydraulic mines. G.O.L.

A TRIP THROUGH THE DUNCAN-LARDO DISTRICT.

IN the early part of this fall our party of three left Kaslo on the steamer *Kokanee* for Argenta, the head of Kootenay Lake, from whence we were to

strike the trail to Howser Lake on an exploring trip through the Duncan-Lardo district.

After accepting the kind hospitality of George Crawford, the "packer" at Argenta, we left for Duncan City, arriving there in good time to do justice to a square meal in the Simpson "boys'" hotel, where we stayed that night, and early next morning left the future metropolis of Howser Lake on the *Idaho*, which, by the way, is the only tug that has ever entered the Lower Duncan River, and is therefore the pioneer steamer of this district. After a pleasant trip of about eight miles we disembarked at Jubilee Point, the headquarters of the Gold Hill Exploration and Development Company of Toronto, who have done extensive exploration work in this district, and have acquired some very promising properties.

the "cache," so a jolly evening was spent around the camp fire.

We then travelled up to Hall Creek, where almost everything in the way of mineral ground has been staked out, and some very strong veins were encountered. The Wagner group, a gold-copper and galena proposition, lies in the Hall Creek district, and is without doubt destined to be one of the greatest mines in Duncan-Lardo. McDonald and McPhail have recently bonded their group, the Bannockburn, for \$50,000, and I likewise learned that the new syndicate had made a rich strike of galena running 210 ounces in silver throughout the tunnel; moreover, the Abbott group is considered a meritorious property; hence Hall Creek may possibly within a twelve-month be a very busy camp indeed.



NELSON, B.C.—VIEW FROM HALL MINES' SMELTER.

THE ASCENT OF THE UPPER DUNCAN.

After remaining here a few days we commenced the ascent of the Upper Duncan River and found the task by no means an easy one, the current being extremely swift. However, we made Howser Creek that afternoon where we saw some promising claims with good surface showings of galena and copper, which will doubtless in time prove valuable mines. But what the locality needs very greatly at the present time is trails and roads. We again took to our boats and bucked the stream as far as "Snaggy Bend Jam," where we were obliged to line and pole for a stiff quarter of a mile. This was exciting work and we were glad to camp that night at Bear Creek and take a well-earned rest. Here we met several of the company's men who had come down for a supply at

A HIGH ASSAY VALUE.

We next spent a few days on East River and other tributaries of the Duncan, then turning by way of Howser Lake proceeded to Duncan City, where we rested that night. On the following morning we rowed across the lake and took the Government trail to the Surprise mine, which has a fine showing, and from ten pounds of average looking ore I got an assay of \$251.04 in gold, copper and galena, which is certainly a very fair return. This property will, with an expenditure of a few thousand dollars, demonstrate its capabilities as a shipper, and deserves recognition in the way of assistance from some of our large syndicates. The present owners are very desirous to obtain backing. But still I have reason to believe in the spring the necessary capital will be forthcoming.

negotiations, in fact, having already been entered into.

THE BIG GLACIER.

After leaving the Surprise cabin we struck the East Kootenay trail which follows the divide, branching off, however, presently towards the north fork, and we make our way as best we can for a distance of six or eight miles over windfalls, through brush and other obstacles, till at last our exertions are rewarded a view of the Big Glacier. Tired out we camped that night, and are rewarded with a most glorious sight imaginable—the moon rising in majestic beauty and illuminating that vast sea of ice. Next morning we commence the slippery ascent, and from observations taken discovered that we were some 10,000 feet above the level of the sea. On one side of the glacier we found stakes where claims had been pegged out. One man had located the "Icicle" mineral claim, of which 1,300 feet was snow and ice and 200 feet discovery mineral ground, but, of course, he wanted a full sized claim and if at any time there is a market for ice, well—he will have a small-sized Klondyke all his own. We lunched on raspberries and huckleberries, bushes of which were growing a stone's throw of the glacier. Snow then commenced to fall, so we returned to camp and next morning were once more on board the *Kokanee en route* for Kaslo, having spent no less than three months in the hills.

The Duncan-Lardo district will, I feel assured, as soon as transportation facilities are provided, become one of the foremost mining centres in British Columbia. The lodes appear to be continuous, the surface values are excellent, and the development work so far done has been of a satisfactory nature.



ROBERT SCOTT, FIRST MAYOR OF ROSSLAND, B.C.

THE ROAD TO THE KLONDYKE.

It is pretty evident that a large number of people have made up their minds that the all-land route to the Klondyke has advantages over the several ocean routes hitherto popular with those bent on reaching the new golden land. The faith in the overland road being the best has received a striking manifestation from Spokane City. The men of this Washington town may be trusted to size up accurately the pros and cons of pretty nearly anything and when they donated four carloads of provisions to be

taken into the probably starving population of Dawson City it is to be presumed that they knew what they were about. It must be confessed, however, that the people of Cariboo, many of whom have traversed the northern country trading or prospecting, do not see so clearly as their generous brethren in Spokane how the supplies are to be conveyed beyond Quesnelle, where for the Klondyke traveller the waggon roads end. As the trails to the north of Quesnelle are impassable for pack animals during the winter months it will be seen at once that neither men nor dogs can have a sufficient supply of provisions even to support life for themselves on a journey of fifteen hundred miles, much less deliver a load upon arriving at their destination.

In the month of May there is good and adequate feed for horses at least at the lower end of the trail and by the time a more northerly latitude could be entered the grass would be in a green state, too. It is certain that there is feed through the entire British Columbian section of the trail, the worst evil being but one or two long stages between good camping grounds. If Spokane's donation left Quesnelle early in May it would reach, with good luck, its destination in August; probably by loading light in the beginning of that month.

While it would be ungenerous in the extreme to look a gift horse in the mouth, the donators of the four carloads of provisions should be told that try as you like, none of the goods can find the miners before the first of August next. The trails as far as Hazelton, some 330 miles beyond Quesnelle, are in good shape but the long tract of country between Hazelton and Telegraph Creek must be traversed by a trail which some pronounce fair and others say barely exists. A trail, and a good one, too, was cut over this section many years ago by the Western Union Telegraph Company and, it is claimed, has never altogether been overgrown. Indians for the most part have used it and there is no doubt but that several of them went over it during the past summer. Beyond this point a good trail will be open next year long before anyone can reach it from Quesnelle; indeed, a fair trail exists there even now.

In connection with the overland journey, the points to be noted are: First—That in winter it is impracticable, and second, that in summer, when it ought to be passable there is, however, a lack of reliable information as to three hundred odd miles of trail immediately to the north of Hazelton. The idea, then, of attempting such a journey in winter being dismissed it remains for those thinking of going to the Klondyke overland to see whether they cannot get an authoritative pronouncement from the Government of British Columbia to the effect that this trail will be opened before, say, the first of July.

A large pack train consisting of over sixty mules is at present being offered for sale in Cariboo and for the sake of illustration we will suppose that one purchased this train and loaded it for the Klondyke with twenty thousand pounds of goods. He would then discover that besides the outlay of capital, which could be more than recovered at the end of the journey, his expenses would be limited to the cost of his food, that of his three assistants and their wages. The country through which he travels maintains his train. It is indeed the poor man's route, for the argument of what can be done with a large train will also hold good for the man owning a cayuse or two. MEG.



RANDALL H. KEMP.

Our Kaslo correspondent, Mr. Kemp, began life as a civil engineer, but afterwards turning his attention to mining he held responsible positions as mill and mine manager in Colorado. In 1889 he was appointed mining engineer for the Spokane & Montana Railway, and while in this capacity used his influence to induce the company to extend its system into Kootenay; however, without avail. Mr. Kemp has resided on his property near Kaslo since 1892.

FROM SLOCAN CITY.

THE MINES AND CLAIMS ON LEMON CREEK.

LEMON CREEK in common with all the granite area of the Slocan Lake country received very little attention until the summer of 1895.

Dr. Dawson in 1889, when making the first scientific report upon West Kootenay, drew attention to the fact that the granites furnished a hopeful field for the prospector.

It took six years and a "scarcity" of other formations before the granite received much consideration. During 1895 prospectors exploring south and eastwards from Springer Creek, came

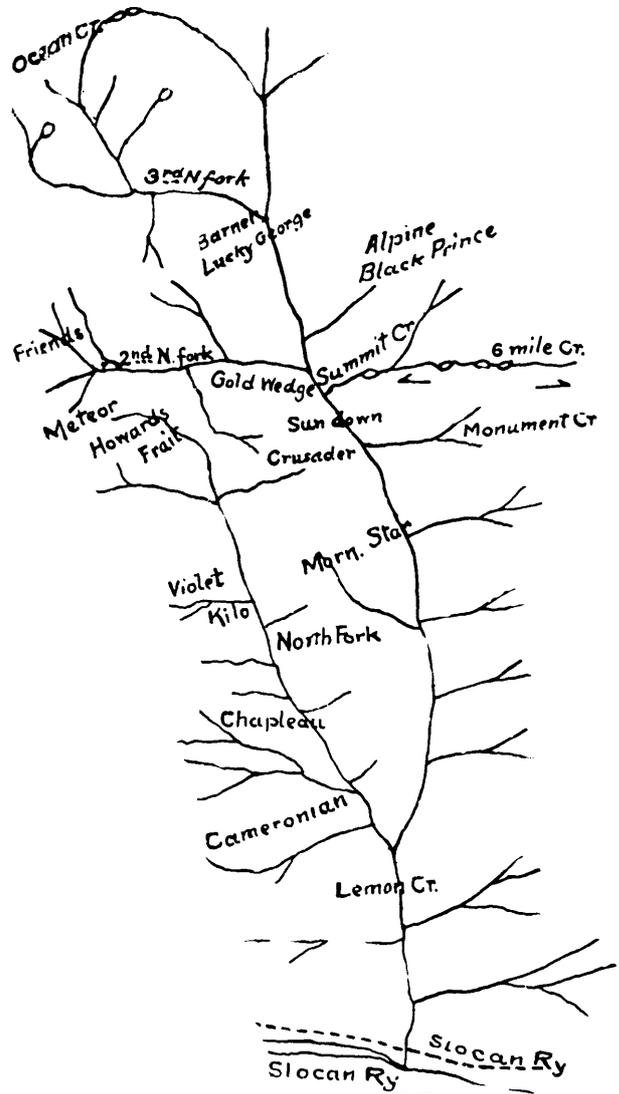
Its History. upon the characteristic dry gold and silver ores of the drainage basin of Lemon Creek. In that year there were many locations made, amongst which were the Two Friends, Meteor, Howard Fraction, Chapleau, Skylark and Ranger, Alpine and Crusader, and later the Black Prince, Gold Wedge, Lucky George, Barnett, Cameronian, Coldblow and Sundown Fraction. These claims are mentioned because they have all been developed to a somewhat greater extent than those upon which merely annual assessment work has been performed, the four first properties having made shipments in car lots, whilst the others have shipping ore in sight and on the dump.

The ores already shipped have been of exceptionally high grade, several car lots being over 200 ounces in silver per ton, whilst there is a gold value of from \$10 per ton up to \$112 per ton, also in car lots. It must be remembered that every sack of ore so far shipped from Lemon Creek has had to be packed or raw-hided

across the divide between Lemon Creek and Springer Creek. The cost of this has been high and to a great extent prohibitive for those properties which lie further back from the Springer Creek side.

A trail has been constructed this fall from the

railway at Lemon Creek crossing to Summit Creek, also another one just completed at private expense up the North Fork. This places the ore-producing properties within from four to ten miles of the railway, which has recently been opened for traffic. The people who have been working the Alpine and Gold Wedge properties have made a trail in from Kootenay Lake up Six-Mile Creek and thence to the upper waters of Lemon Creek is a very low one and the total distance by this way to Nelson is less than twenty miles. However, the natural outlet appears to be down the drainage of Lemon Creek, since only the upper part of the creek can be reached on a level grade from the Kootenay Pass.



Concerning the country rock of this section, there appears to be no visible difference to that of the country lying to the north and northeast whereat is situated the Enterprise, Arlington and Kokanee Creek deposits. This rock is a granite composed mainly of the orthoclase feldspar, quartz, hornblende biotite mica. There are local differences due to respective proportions in these constituents, but to all appearances the rock is the same, and is a dark gray

Characteristic Formations.

coarsely crystallized granite, carrying characteristic crystals of feldspar of large size. The nature of the country rock is a very important factor, apparently, everywhere. Here are confined certain typical ore deposits. South of the lower portion of Lemon Creek there is a change of formation. The granite becomes more feldspathic—a lighter coloured rock. It also shows a tendency to banding and contains many dark basic dykes and pegmatite veins. It appears so far to be but poorly mineralized. There is an interesting improvement in the gold values as one goes southwards from Springer Creek across Lemon Creek. On Springer Creek ores running 200 ounces of silver and half an ounce gold are common. On the north slopes of Lemon Creek the values are more nearly equal, some shipments going from ninety-six ounces of silver and three-sixths of an ounce of gold to sixty ounces of silver and five-sixths of an ounce of gold. After crossing Lemon Creek we come to the Black Prince, Maple Leaf and Alpine groups. These are chiefly gold properties, the silver values being small. The country rock is much the same, as also are the veins in structure and in origin.

The main ores of this section are silicious dry ores or quartz veins carrying argentiferous and auriferous pyrites and argentite together with some native free gold, *i.e.*, besides the resulting gold found free in the oxides. The quartz is usually very coarsely crystallized. The ore occupies cavities and interstices in this quartz, but is also sometimes banded. The dip of the ore bodies as a rule is under forty-five degrees from the horizon, hence they are rather flat for working economically. It is commonly expected that these will become vertical at increased depth. So far as proved this is not the case. The veins are rarely over four feet in width and vary quite rapidly in size. Neither is the ore or richer portions of it evenly disseminated, but occurs in shutes and pockets. Those concentrations of value, however, will probably be found enough to make the properties pay.

Besides the ore which is at present sorted to a value which will pay heavy rates, there is a second class ore which will in many cases go about \$25 a ton. The values in this are scattered amongst the pyrites and in the barren quartz itself which usually carries some free gold, as much as half an ounce in some cases. There are hundreds of these quartz veins on Lemon Creek. Some are rich enough to ship now; a great many more are not. Nearly all, however, carry high grade gold and silver ore in small quantities, in most of which cases the amount is too small to pay expenses, as the ore is hard to sort and shaft work expensive.

There is but little doubt that a cheaper process will be found for extracting the value from these ores than that of smelting. Any treatment that costs less than \$25 a ton can be sure of a large supply of material, as in many cases the whole quartz body would be profitable. The chief problem, however, is in the saving of

The Treatment Problem. the fine sulphides of silver which are fine disseminated through the quartz and so form a hard subject to concentrate. The nature and origin of these Lemon Creek ore bodies cannot yet be definitely settled as few of the properties have been opened up to a depth passing beneath the line of surface oxidation, and that extends to only some twenty-five to fifty feet down.

The properties which have so far been working this

winter are the Two Friends (which drains into Lemon Creek), Meteor, Howard Fraction, Alberta, Kilo, Chapleau, Cameronian, Gold Wedge, Crusader, Crown Point and Nelson.

The accompanying sketch map will illustrate approximately the position of the most developed properties, the total length of the creek being about sixteen miles, giving a total area drained by Lemon Creek of about eighty square miles.

J. C. GWILLIM.



F. ADRIAN MEYER.

Mr. Meyer, who has acted for the past two years as correspondent to the MINING RECORD from Vernon is a much respected resident of that town, in the progress of which and of the surrounding country he takes a keen interest. He has twice served on the City Council Board—in 1894 as Alderman and in 1896 as Mayor. Mr. Meyer came to British Columbia in 1891 from Japan, where for twenty-five years he occupied a chair in the Government University, the naval and commercial college. On his retirement he was decorated by the Emperor with the fifth order of the Rising Sun. Mr. Meyer now holds office as Sub-collector of Customs and Deputy Collector of Inland Revenue at Vernon.

THE YEAR'S PROGRESS AT ALBERNI AND WEST COAST.

A YEAR ago it was an easy matter to furnish a list of the best looking prospects on this coast; to-day it would be quite an undertaking, owing to the great number of locations made during the past summer, extending from San Juan to at least one hundred miles north. A large percentage of those claims are quartz propositions showing such favourable surface indications as to create considerable interest amongst mining men, and have been the means of several experts representing wealthy syndicated interests visiting the coast during the past season. The results of these investigations speak for themselves in the investments made, the work that is being carried on, and the amount of work proposed.

A CRITICAL STAGE.

The past season has been a critical one for this camp, owing to the fact of its having arrived at that stage where the merits of the prospects had to be sub-

mitted to the judgment of many experts for condemnation or endorsement for capital, and this, in the face of a great mining boom in Kootenay and the most dazzling reports from the Klondyke. Notwithstanding these counter attractions it is gratifying to know that the prospects of our west coast never looked brighter than at the present. We are yet in the first stage of development. Last season certainly gave an impetus to prospecting from the fact that several prospects were sold during the spring. The result of the prospecting done this year is most encouraging. When we consider the small area covered by the prospectors, the number of claims recorded, and the vast stretch of country that has never been looked at, we may well speculate on the possibilities of the future inherent in the country.

seven continuous claims. A small cut has been made here in one place showing sixteen feet of solid ore, averaging seventeen per cent. copper, and a small value in gold. This property will be thoroughly prospected this winter. Adjoining the Mountain Treasure group are four claims belonging to a Victoria syndicate, where work will also be commenced. These two properties having excellent surface indications the development will be watched with interest, as the result will radically affect the prospects of hundreds of claims in that vicinity. On Uchuckleset Harbour a very small amount of work has so far been done in comparison to the number of claims staked. The Dominion Company, of Vancouver, have recently purchased some property here with a good showing on the water front. At the mouth of the



A DRILLING CONTEST.

By examining a map of Vancouver Island we notice the west coast is cut up by numerous bays and inlets that in many cases extend far into the interior of the Island. These inlets are mostly navigable and offer great facilities for the prospector. Most of the work done this season has been confined to these inlets, in several of which good locations have been made.

PROMISING PROSPECTS.

Amongst the many I could mention is the Mountain Treasure group, situated at Anderson Lake near Uchuckleset Harbour, purchased by the Gold Trust Company, of Vancouver. The property consists of

harbour is the St. George group of claims owned by a Victoria syndicate and under development. Adjoining the St. George is the Mountain Green claim recently bonded by Mr. Armstrong, of England, representing the Alberni Development Company, which is being prospected, so far with good results. Coming further up the Canal, twelve miles from Alberni, we find the Pacific group of seven claims owned by Messrs. Wensen & Co., also under development. Adjoining the Pacific group is the Wilson property with sixteen feet of good ore in sight. These last two properties, I understand, are under bond to an American Company. On the opposite side of the Canal to the Pacific group is the Smith property, under bond to

the Gold Trust Company, of Vancouver, where considerable work has been done this season.

The Alberni Consolidated mines at Mineral Hill are well known to the public, being among the first to be operated in the district. Last summer Mr. Moire was put in charge with instructions to trace the different rich leads which were known to exist and prove their continuity. This he has done in a most effectual manner, driving crosscuts at various distances with the greatest success and exposing sufficient ore to warrant to company installing a small plant which could be enlarged as the mine developed. The work done on the Alberni Consolidated lately by Mr. Moire is a striking illustration of what can be accomplished by the right man in the right place.

Around the Alberni Consolidated property are several good claims that will be developed, it is hoped, shortly. Opposite Mineral Hill on Douglas Mountain mining activity has been much evidenced of late and here the Regina group has been bonded by the Alberni Development Company, who are making preparations to work on an extensive scale. Following up the valley we come to the Golden Eagle group which is being opened up by Mr. Newton, of Victoria. Beyond this are the King Solomon and Great Divide claims, whereupon much able work has been done.

FROM ALBERNI NORTHWARDS.

Leaving Alberni and going north we find claims staked and work being done in various sections. At Effingham Inlet, where the Gold Trust Company are operating; at Anderson's Landing, Deer Creek, in Clayoquot, at Tranquil Creek, where General Ashton, of Tacoma, has lately purchased a large property, at Kennedy Lake, where there are excellent surface indications, Bear River, Ahouset, Shelter Arm, Sidney Inlet, Hesquoit, Nootka Sound, and Quatsino.

At Sidney Inlet the Dominion Company, of Vancouver, are opening up one of the finest prospects on the coast. Visitors to the west coast would be well repaid by inspecting these claims, where they can see a lead of peacock copper which will gladden the heart of a miner.

Next year we hope to have several of these properties developed on a large scale. I have no doubt there will be lots of failures; on the other hand I am perfectly satisfied there will be many successes.

F. T. CHILD.

THE FIRE MOUNTAIN DISTRICT.

DIFFICULTIES IN THE WAY OF EXPLORATION.

NOW that the winter snow and rains have set in, most of the prospectors who made the shores and vicinity of Harrison Lake so lively this summer have departed for more congenial quarters. One of the advantages (the storekeepers call it disadvantage) of this locality is that all these prospectors have to do if they wish to pull stakes is to get into a canoe or boat and float down to New Westminster, and there wait the result of development work of others more enterprising than themselves; thereby they will know whether the six to twenty claims that each has located will be likely to "pan out" or be worth the labour entailed in doing next year's assessment, for of course they are able to return in the spring in the same inexpensive and expeditious manner. The prospects

before this camp, I am glad to be in a position to say, are very promising. The Providence mine on the shore of the lake is steadily improving, native silver being present in the ore in large quantities; there are, moreover, about one hundred tons of ore on the dump awaiting a rise in the water ere being shipped to Everett. Messrs. Spike and Campbell have accepted a contract from the Lily Mining Company to run a fifty-foot tunnel along the ledge of the Golden Eleven and then crosscut thirty feet, and have already completed some ten feet of the work, the ledge looking very well indeed with values averaging about \$12 in gold.

THE COMING MINE OF FIRE MOUNTAIN.

The mine, however, on which all of the prospectors are basing their hopes, whereon, too, work is being prosecuted with the greatest pluck and energy in the face of great natural difficulties, is the Money Spinner mine operated by the Fire Gold Mining Company, and situated upon Tipella or Fire Mountain some fifteen miles from Harrison Lake at an elevation of about 4,500 feet. The company commenced work this spring under the direction of their energetic manager, Mr. J. R. Brown, and this necessitated the construction of a trail, which was made along the side of the mountain; three large bridges were built and then a pack train and two horse teams were pressed into service to carry in machinery and supplies during the summer.

THE SIZE AND VALUE OF THE ORE BODY AND WORK DONE.

At one time they had about seventy men at work, but this was reduced to one-half the number after the sawmill, which is situated a few hundred feet below the mine, was finished. The company's energies are now being directed to getting the stamp mill in running order, and there is sufficient ore on the dump to operate the mill several months. A tunnel has been run in on the vein for 180 feet, and at a point about eighty feet from the mouth of the tunnel a shaft has been sunk eighty feet in a five-foot ledge of ore having an average assay value of \$90 to the ton. In fact the owners are confident they have the best mine in British Columbia and expect to startle the mining community when the mill is in operation. Undoubtedly they have a fine body of free milling rock, and furthermore if this mine proves to be as valuable as is expected, capital will be invested largely in this hitherto little known section of the province and consequently numerous promising properties will be developed on Tipella Mountain and its vicinity.

AN IMPORTANT DEAL.

I understand that Messrs. Bremen, McGregor & Co. have bonded their six claims in the same vicinity to an eastern syndicate for \$100,000. The Broken Three Company have also done a lot of work in these three promising claims. Altogether matters are standing well. The trouble is that this section has been very little explored and the country is so difficult to penetrate that it is beyond the capacity and endurance of the ordinary unassisted prospector. Take between Douglas and say Yale or Lytton on the Fraser River or Howe Sound on the other side; it is an almost impenetrable wall of mountains quite unexplored. The Money Spinner ledge, for instance, is near the old Cariboo waggon road and it stands out from the side of the mountain like a white monu-

ment, and yet it was not discovered until last fall. There is no reason why there are not hundreds of such ledges if there was any means of getting at them. This is a matter which the Government should certainly investigate with a view to remedying the deficiencies.

KAMLOOPS.

THE NORTH THOMPSON RIVER.

KAMLOOPS is situated at the junction of the north and south branches of the Thompson River, the latter coming from the east, the former, generally spoken of locally as the North River, from the north.

On the east side of the north branch is a waggon road terminating fifty-two miles from Kamloops at the Chuchuqualk Indian village. The river itself has been ascended by stern-wheelers some 120 miles, but this can only be done at high water. In response to a request made by the people of Kamloops the Dominion Government has authorized an inspection of this stream with a view to the removal of the few obstructions that at present prevent its being used as an avenue for the transportation of supplies and products.

With these impediments removed navigation will be possible throughout spring and summer, opening up a good mineral country about which comparatively little is known at the present time.

A few weeks ago I had occasion to make the journey from Kamloops to the Chuchuqualk village. It was a bright, frosty morning when I left the town in a comfortable buggy behind two good horses; one, a colt, was rather new to his work, but beyond an occasional shy, performed his duty well. The start was made about ten o'clock, and settling down to a seven-mile trot, the town was soon left behind. For seven miles the road traverses the Indian reserve, the property of the Kamloops band, but as soon as the limit is reached there commences a chain of farms without intermission for five miles, while a similar condition of affairs is seen to exist on the opposite side of the valley. Eight miles from Kamloops there is an outcrop of limestone where a kiln was built some years ago and good lime burnt. Two miles beyond the limekiln is a deposit of clay suitable for bricks, and a brickyard has been established at this point, the product being employed in the construction of several buildings in Kamloops.

Passing the string of productive farms, with their comfortable houses, Edwards' Creek, twelve miles from the starting point, was reached. In this neighbourhood a number of mineral claims have been located and on most of them assessment work has been done, though nothing further than that—insufficient to warrant one expressing an opinion as to their value. Near Edwards' Creek, a few miles east of the waggon road, is an intrusive mass of porphyritic syenite, of which Dr. Dawson makes special reference as likely "to contain a workable quantity of gold," traces of which were found on assay. Needless to say, this section is all staked off.

At Edwards' Creek, near the road, is a much-needed wayside inn where liquid and other refreshments can be obtained for man and beast. Up to this point the road had been fairly level—a splendid run

for cyclists—but now began hill-climbing, the road winding its narrow way along the face of a precipitous bluff with on one side an almost sheer drop of several hundred feet to the river below, and on the other hand the mountain slope towering far above. Pretty as was the scenery before, now was added a grandeur and wildness greatly augmenting its charm. From this bluff can be seen Jamieson Creek, a mineral section of which the writer will have more to say at some future date. Beyond Jamieson Creek is an extensive outcrop of limestone plainly visible from the road.

This bluff, once passed, another stretch of farms commenced, continuing for several miles, and after a good deal of up and down hill travelling, the cañon was entered. Here the roadway is quite narrow; elevated but a few feet above high water mark; and at the very brink of the river. The scenery here is enchanting and one never wearies of the picture; the intensely blue water, the trees with foliage of all shades of colour, the mountain peaks in the distance—an ever-changing panorama.

In due season the welcome sign "Louis Creek House, One Mile," fastened to a tree by the roadside, met my appreciative eye, and a few minutes later I pulled up at the house, forty miles from Kamloops, rather tired but with a wolfish appetite, as I had not partaken of any food since early morn. The host of this quiet hostelry I had passed on the road many hours earlier, and the only other male on the premises was an old prospector and miner, who regaled me with many yarns of his experience as we smoked our pipes in the evening. I was also shown numerous samples of auriferous quartz and silver-lead ores, all from the

North Thompson Valley and Adams Lake district. The expense of getting in supplies and inadequate means of transporting the ores greatly retard the development of the mineral resources of this section, a state of affairs likely to be shortly remedied by the clearing out of the North River already referred to.

As early as 1861 placer mining was carried on at Louis Creek, \$10 a day to the hand being obtained. At Barriere Creek, a few miles above Louis Creek, placer mining was also prosecuted in the early sixties, those palmy days so dear to the "old timers."

Next morning I was up and dressed while the stars yet shone brightly. An early breakfast enabled me to start, with a change of horses, as the dawn broke. The frozen ground was white with frost, the air cold and biting, but after a good, hot breakfast, with a pipeful of T. & B. burning under one's nose, these trifles only add zest to such an excursion.

One mile beyond Louis Creek the road forks, and here is a large board on which I read, by the gray morning light, this legend: "Raven's Avenue. Victory Farm nine miles. Homestake Mine sixteen miles."

The Homestake mine, though about fifty-six miles from Kamloops by waggon road, is only twenty miles from the C.P.R. track near Shuswap, a station thirty-three miles east of Kamloops. The group comprises seven claims. A stream of water running through the group will give all the necessary power for working the machinery to run the mine. The ores consist of (a) a low grade deposit from twelve to thirty feet thick of galena carrying gold and silver, with an

At Edwards' Creek.

North Thompson Quartz.

I Visit Chuchuqualk.

The Homestake.

average value of \$12 per ton, and (b) a forty-inch vein of quartz containing leaf and wire silver. Careful sampling gave an average value of \$100 per ton in gold and silver.

From Louis Creek to the Indian village the route is not an inspiring one. A solitary log cabin on a small clearing is the only break in the twelve mile drive through a timbered country, over a rough road full of stumps, stones and roots. At the reserve, however, everything is completely changed, for an extensive stretch of prairie reaches from the base of the mountains to the river and extends several miles by the side of the stream.

Arriving at the "metropolis" of the Chuchuqualks my horses—ancient, reliable steeds—were cared for while I thawed out before a log fire in the chief's tent, the confined smoke soon making my eyes smart and the unbidden tears flow.

Two miles beyond the village there is what Dr. Dawson terms a "basin of sedimentary rocks." This basin he "particularly examined" in 1877 because of the occurrence of coal in it." He remarks: "The coal-bearing character of the formation appears to persist throughout the section," and strongly urges examination by boring, a recommendation that has not, so far as I can learn, been carried out.

A tunnel has, however, been driven and a seam of coal over three feet thick is said to have been struck. The quality of the coal is excellent, and makes good coke. If there be a seam of first quality

Coal is Found Here.

coal between three and four feet in thickness within easy reach of Kamloops, it seems odd that so little has been done towards putting the product on the market. It is a pity that Dr. Dawson's advice has not been taken and the deposits thoroughly explored by boring.

Little Fort, the point from which the proposed waggon road to connect the North River with the Cariboo road at Bridge Creek is to start, is eight miles from the Indian village. The survey party sent out by the citizens of Kamloops to select a route for the road found that the trail (of thirty miles in length) they had intended adopting was impracticable as a waggon road on account of the gradients. A longer but easier way was found, and although the distance from Little Fort to Bridge Creek, fifty-seven miles, is much longer than was at first anticipated, the advantages

The Royal Road to Klondyke.

greatly counterbalance that drawback. In this connection it may be said that the Provincial Government has virtually promised to build the road. Indeed, the Premier went so far as to intimate that he favoured a narrow-gauge railroad, but it is not yet on the cards whether the Government intend presenting the country with the ready-made article.

Having fulfilled my mission, I turned my team homewards, reaching Kamloops long after dark with no further misadventure than losing the road a few times in the intense blackness of the cloudy night.

M. S. WADE.

FAIRVIEW, B.C.

GREAT expectations regarding the future of this camp, to judge by all present indications, bid fair to be realized. For the usual "boom" method of advertising the value of our mineral wealth is conspicuous only by its absence, and the town is growing and the camp developing in a business-like manner

which shows that the property holders and merchants have faith in the value of the vast bodies of mineral discovered in the hills round Fairview.

THE TINHORN—LOCAL OPINION AS TO ITS VALUE.

Among the companies operating here the most noticeable are the Tinhorn Quartz Mining Company, the Smuggler Gold Mining Company, the Fairview Mining Company, and the Winchester Gold Mines Company. The Tinhorn Quartz Mining Company, under the management of Messrs. Dier, Davidson & Russell, has done much so far to bring prosperity to the camp, but whether this tide of prosperity will remain with us or not the Tinhorn mine may yet decide. I have not personally been through the underground workings of this mine but understand from reliable persons that there is a vast body of free milling ore in sight in the mine and most people who know anything about mining and have visited these workings are confident that under economical management the Tinhorn Quartz Mining Company will soon be in the list of dividend paying properties. It appears, however, that the methods employed by the management are regarded here as anything but economical, indeed lack of foresight and negligence in matters of detail are ascribed to them. The company has, at enormous cost, erected a sixteen-stamp triple discharge quartz mill (by Joshua Hendy & Co.) which is, I believe, the finest mill of its size in the province and is certainly as neatly arranged a set of machinery as one would wish to see. From the different workings of the mine there is a system of tramways converging to one large ore box from whence the ore is carried by gravity trams to the mill. Everything is conveniently arranged and apparently no money has been spared to make the Tinhorn the best equipped mine in the district. What seems to the general public to be the shortsightedness and negligence is the fact that the mill should have been erected away up the mountain side at an increased expense for freighting and without the requisite water facilities when there was obtainable a splendid mill site within easy reach of Okanagan River and in the valley bottom. The first export of gold from the Tinhorn mill occurred on Wednesday, December 16th, but for some reason the result of the thirty-days' run was not made public. I was told, however, by a person who saw the gold that it was in the form of two oblong bricks and a large button which, according to the sizes my informant gave me, should represent a value of some \$18,000. Small quantities of Tinhorn stock are offered at \$1.00.

STRIKE ON THE SMUGGLER.

The Smuggler Gold Mining Company, under the superintendence of Mr. H. C. Carr, is making good progress and this property gives promise of enormous value if the present strike of ore proves a continuous ledge. After tunnelling over 300 feet into the mountain the company was rewarded by striking a body of ore forty feet wide from which good assays have been made. This is supposed to be the same lead which shows on the surface at the mouth of the shaft. The men are now upraising in ore to tap the shaft. Mr. Maurer, the secretary of the Smuggler, is expected back from Toronto shortly, and it is believed that a mill will be erected by his company sometime in the spring. Small blocks of stock are quoted at thirty cents, par value \$1.00.

The Fairview Mining Company is going steadily

to work without any blowing of tin horns or brass band accompaniments. There is a large number of men employed in the mine and a graded road has been built from the mine to the foot of the hill where a mill site has been graded and many other preparations made for the erection of a stamp mill. The principal claim owned by this company is the Joe Dandy.

The Winchester Gold Mines Company is one of the several Fairview companies promoted and managed by Messrs. Dier, Davidson & Russell. The Stemwinder claim is owned by this company and seems to be a thoroughly good property of a free milling character. It was acquired by the company quite recently and local investors have endorsed the judg-

ment of the camp and the development of the country the better it will be for their own pockets. Their present method of holding out for extortionate prices retards the progress of the camp and keeps themselves poor.

KERMEOS-FAIRVIEW WAGGON ROAD.

Messrs. J. H. Riley & Co. have bonded the Opulence, the Swansea, the Recompense and the Eldorado mineral claims situate in Keremeos. The Opulence has a large body of hornblend carrying native copper and the other three claims have good showings of copper. Messrs. Steward, Macpherson-Grant, Campbell and Skinner were to commence development work on the 1st of January, and as the ore is



A SNOW SLIDE—NOBLE FIVE MOUNTAIN, CODY, B.C.

ment of Messrs. Dier, Davidson & Russell by buying largely of the first issue of shares. The mine is being rapidly developed, and it is proposed to erect a stamp mill in connection with the mine early this spring.

PROSPECTS AND EXORBITANT PRICES.

There are many very good looking prospects about the camp; they are held at high figures though and consequently do not meet with ready sale. It does seem rather absurd that a man should go out into the hills and drive a ten or fifteen-foot hole into the rock and then demand ten or fifteen thousand dollars for the improved mine. The sooner the prospectors realize that low prices are necessary for the advance-

won from the mine it will be shipped to the smelter. If the results of these workings prove anything like as good as the surface showings indicate the reputation of the Keremeos mining district will be firmly established. I take this opportunity of calling attention to the fact that a good waggon road is badly needed between Fairview and Keremeos; at present there is merely a pack trail, unless one goes rather more than double the distance necessary by trail. The lack of railway facilities is at present the most serious drawback to the camp since it is not fully proved whether the ore is of a smelting or free milling nature.

The town of Fairview is steadily growing and very

soon the new hotel will be opened. This hotel will be second to none in the interior of British Columbia, and will be appreciated by the travelling community.

RICARDO.

FROM NELSON.

THE month of December has witnessed the completion of the Slocan River road connecting the railway between Robson and Nelson with the Slocan Lake. Although there is a gap between Arrowhead and Nakusp, and another between Rosebery on the Slocan Lake and Slocan City, where the new line reaches it, there is no handling of freight *en route*. By means of barges

Railroad Enterprises.

the whole train is transferred, so that now the Hall Mines smelter, for instance, gets its coke in the same cars that were loaded up at Comox. The new line was opened early in the month and a party from Nelson were taken over it as guests of the C.P.R. to Slocan City, where the inhabitants had prepared a banquet and other festivities to entertain them. At the present time of writing the line has not been open long enough to have exerted any influence on the Slocan traffic, but the facilities it affords for travel between New Denver, Three Forks, Nakusp, Sandon and Nelson are so great that before long the route *via* Kaslo will be practically abandoned.

In another direction the C.P.R. has also extended its system by making an arrangement by which its passengers are carried from Robson to Trail over the line built between these places by Mr. Heinze. The C.P.R. seems to have made up its mind to go to Rosslund, and it is said that not being able to come to terms with Mr. Heinze for a permanent arrangement, it will build its own line. If so, it is a little difficult to see what Mr. Heinze will do with his. He may just as well let it slide into the river.

The effect of the Crow's Nest Pass line is already being felt. A large amount of supplies are being shipped from Nelson to the head of Kootenay Lake, whence they are taken to the scene of operations by the new waggon road up Goat River. At this end the extension of the C. & K. railway, which is virtually a part of the Crow's Nest line, is also being proceeded with. A large barge capable of carrying twelve loaded cars is also being built for use as soon as the Crow's Nest line proper reaches Kootenay Lake. The route thence to Nelson is somewhat difficult and during its construction trains will be transported on barges.

Besides paying a ten per cent. dividend the Hall Mines has written off \$27,000 for depreciation of plant and the shareholders of this company may congratulate themselves. The new reverberatory furnace is nearly completed and by the middle of January will be ready to turn out blister copper. A new roaster is also nearly ready for work. The small furnace

Progress at the Mines.

which was built first is to be used for custom work on lead ores and will begin its duties forthwith. At the mine they are kept busy supplying the big furnace with about 250 tons a day which is the biggest output of any mine in Kootenay.

At the Athabasca work is progressing satisfactorily and a new vein has been disclosed which adds to the value of the property. It is understood that negotiations are proceeding for its purchase on the basis of fifty cents per share.

So satisfactory was the first run of the Fern that the directors have decided to double the battery power by putting in ten more stamps and installing a cyanide plant at once.

At Ymir the Dundee and the Ymir have large forces of men at work and several good strikes are reported from the neighbourhood. On the North Fork (of the Salmon) recent discoveries uphold the reputation of the creek.

Spokane is loudly pushing its claims as the best starting point for the Klondyke. From a British Columbia point of view it has decided merits. Persons who adopt it will have to travel several hundred miles through the province. If they buy their outfit in Spokane, they will have first to pay duty on it at our frontier, then they will probably require another before they get through and they can purchase it at Kamloops, or Ashcroft, or Barkerville, or at any of the other towns they pass through. In any case, if they make as much money in the Yukon as they spend in British Columbia on the journey through they will do well.

The mineral exports from West Kootenay for 1897 will not quite reach ten millions, but by the time the December figures are in they will probably reach nine millions—a tremendous increase on any previous year.

PICK.

NORTH-EAST KOOTENAY.

THE year has seen East Kootenay created into northern and southern official districts, with the northern section in charge of Gold Commissioner Griffith. Activity in mining matters has been greater during the past twelve months than at any previous period till now—the best evidence of *bona fide* mining. The winter development camp is strongly in evidence, and there is little doubt that by next season, with adequate government assistance in the way of opening out roads to the mining camps we shall see several shipping and milling mines. Two local development companies have also been organized, with headquarters at Golden.

The Year's Developments.

In reviewing the year's operations I shall begin with the northern portion of the district. Hitherto little or nothing has been done in the way of location and development north of Donald. This season a group of three claims has been located on the divide between the Bluewater and Clearwater Rivers. Phenomenal assays have been obtained on this property, the ore running between \$300 and \$800

Phenomenal Assays.

to the ton. The property is at present difficult of access, but the eastern capitalist who has a bond thereon intends beginning extensive development work as soon as the snow goes off. The ore so far found consists of gray copper and galena, of which there are about forty tons in sight without any development work having been carried on. What is believed to be the same ledge extends towards Donald and several claims have been located on it along the headwaters of Gid's and Brown's Creeks, tributaries of the Bluewater and Wait-a-bit Rivers respectively. The outcrops have shown free gold and chalcopryrite. There will be much activity in the prosecution of development of these new discoveries as soon as the mining sets in.

Bald Mountain, a few miles from Donald, in the Selkirk Range, has long been recognized as a mineral

country, and this season for the first time considerable development has been here carried on by the Bald Mountain Co., who own a large group of claims and have a winter camp at work. The tunnel and cross-drives have discovered a ledge thirty feet in thickness with two chimneys running through it, one six feet and the other five feet in width, and the assays from which have run from \$5 up to \$60 per ton in what is claimed to be free milling gold quartz! There is a large section of mineral country in the vicinity on both sides of the C.P.R. main line whereupon the indications are good. This district is relatively speaking unprospected, but, judging from the few locations that have been staked, gives promise of becoming a great copper-gold producing centre.

Further inland an English company represented by W. S. Mitchell-Innes holds a large group of claims on what is known as Prairie Mountain, where a camp was at work several months putting in a tunnel. The property was examined by Mr. Pellew Harvey and on his report will depend the character of the work to be prosecuted thereon during next year.

Going south we come to the McMurdo country, where as one result of active development work the Kootenay Consolidated Company succeeded in proving their property to be a mine. A description of this remarkable property appeared in your last issue. The mine is now being put in a position to ship ore, and if satisfactory arrangements can be made with the Government anent the road required to give access to the railway, a concentrator and aerial tramway will be built in the spring and the mine added to the shipping list of Kootenay. A winter camp is at work driving the low level tunnel and blocking out ore. Adjoining this group of claims is the International Basin, where the owners have done a good deal of development on the International proper, while Messrs. Jolliffe and Stracey, the owners of the Maud S and Stanby claims, and Mr. Keyser, the owner of the Picton and Maple Leaf claims, have had winter camps at work on their properties. The contractor is putting in tunnels and shafts on the Maud S, which, it is considered, will place the mine in a position for successful operation.

A few miles south of the International is the Burns Basin, where there is a stamp mill that was worked only a short time owing to bad management, for the gold was found in the tailings. The mine has been tied up owing to the death of one of the owners, litigation and other complications. In this basin a certain amount of development has been performed this season, especially on the Lincoln claim, which was recently sold to a gentleman from Oregon. A winter camp has been at work on this claim driving a tunnel to cut the vein and similar work will shortly be started on the Bryan claim adjacent to the Lincoln.

At the Crown Point, a galena property on McMurdo Creek, the Kootenay Consolidated Company have driven a tunnel for about 120 feet, and will resume work in the spring. The same company have also opened up fairly thoroughly the Idaho and Alaska claims on Copper Creek, a tributary of the Spillimacheen. Another property on which development was done on Copper Creek is the Mabel group, the property of the Alberta and Kootenay Company. A tunnel was driven between sixty and seventy feet

running alongside a strong nine-foot lead which carries copper and gold. There are three other leads showing on the property.

On the Bugaboo a good deal of work was done this season by Dr. Langis, of Vancouver, and by the Golden and Fort Steele Development Company. On the former's property the results were rather disappointing, but the latter company got out some ore and declare shipments will be regularly made from the mine next season as there is a large quantity of ore in sight.

No further work of any note has been done on the Selkirk Range till we get to Windermere district where sixty feet of tunnelling with open cuts and other development has been done by Capt. Armstrong on a most promising copper property that he holds on Horsethief Creek. This claim is the Delos, and right on the peak of the mountain about two miles above it is another copper property owned by the English company represented by W. G. Mitchell-Innes. A shaft has been sunk on this property showing the lead to be widening. This ore is a grey copper which assays from thirty to forty per cent. of this metal. A good road has been built to the property and a first-class camp put in to enable work to be resumed in the spring.

The year has been a most active one on Toby and Dutch Creeks in the Windermere district. Bands of prospectors flocked in there from Fort Steele and something like 400 locations were made. As usual in cases of the kind very little development has taken place on this creek, though it is likely work will be done next season. There are many good prospects and some of them are pretty certain to turn out well. A peculiar feature of the ores in this district is the low grade of the gray copper, antimony taking the place of the higher values usually attaching to this class of ore throughout the rest of the district.

Turning to the Ottertail district there is likely to be considerable activity as the result of the discoveries this season. For some years ore of high quality has been found here, but not in place. It is supposed that the main lead has been found on some claims bonded by the Channe Mining Company, of Vancouver, on Ice River, and about seven miles up the Ottertail River Mr. T. Hebsen is driving a tunnel of eighty to 100 feet on what is believed to be the same lead. Samples which Mr. Willis, manager of the Channe Mining Company, had assayed from the Ice River claims give returns from \$200 to \$300 per ton. Mr. Knowlton, of Foster, Quebec, has a winter camp on the Sunday claim, near the C.P.R. line, and has arranged to get a carload of ore to ship. This ore will assay from \$60 to \$100 to the ton. This is an exceptionally rich deposit, but it is very doubtful whether it will be found in place.

A mining association has been formed which promises to do excellent work in looking after the mining interests of the district. The outlook has never been more hopeful, and the consensus of opinion is that the year's work, both in the way of development and discovery has shown that the mineral resources of this part of Kootenay are as good as those of any other portion of British Columbia.

E. A. HAGGAN.

Golden, Dec. 20th, 1897.



HOWARD WEST, A.R.S.M., OF NEW DENVER.

Mr. Howard West is well known throughout West Kootenay as a clever assayer and a conscientious mineralogist. He is a graduate of the Royal College of Science (with which is incorporated the Royal School of Mines) where in 1889 he won the open scholarship. He afterwards spent some time in learning practical work in the deep level mines of Cornwall. Mr. West settled in Kootenay in the spring of 1894 before the towns of Sandon or Slocan City existed, or the Lake district had been prospected. He has been a frequent contributor to mining and technical literature, not only in the RECORD, but through the columns of the best Canadian and American mining journals.

FROM KASLO.

THE TRADE OF THE DUNCAN LARDO COUNTRY.

KASLO, now one of the chief towns of West Kootenay, situated on the west shore of Kootenay Lake, has grown and thrived on account of the business which the Slocan mines have created. Yet its people are ambitious and hence are now endeavouring to secure the trade of the Duncan, Lardo and other sections which are naturally tributary.

The latest proposed enterprise, and one which requires the assistance of the Government, is the construction of a wagon road from Kaslo to the now important mining district on Woodbury Creek. This district lies six miles west of Kootenay Lake, but the fall of Woodbury Creek is so great from the situation of the claims to the mouth of the stream that a wagon road therefrom would be impracticable. By building from Kaslo the distance would, however, be only eight miles and the roadbed could be made over natural benches for nearly the entire distance.

THE KASLO BOARD OF TRADE AND KEMP'S SPRINGS.

The business men of the town have recently organized a Board of Trade and are making a united effort to aid in the development of those resources which will benefit and draw attention to the municipality's commercial advantages. A projected enterprise is the improvement of a property three and an eighth miles to the west of Kaslo whereon a settler of long standing, Mr. Kemp, discovered the existence some years ago of springs of mineral water possessing valuable medicinal properties, with a view to making it a health and pleasure resort. On this property, which

contains upwards of 400 acres of good land, there are at least a half dozen mineral springs. The water is said to be for tonic purposes equal to that obtained from the springs of the fashionable German watering places and it is moreover very palatable. It is expected a business of bottling this water by machinery will be established early in the year.

KASLO AS THE HEADQUARTERS OF MINING CORPORATIONS.

The convenience of Kaslo due to its central position has been recognized by mining and development companies operating in the Slocan and consequently it has become the headquarters of many wealthy corporations. Take, for instance, the Alberta & British Columbia Exploration Company, Limited. This company owns 40,000 acres of choice farming land on the Kootenay River Valley situated between the south end of Kootenay Lake and the International Boundary; 8,000 acres have been cleared and protected by a system of dyking and are now ready for the farmer, stock or poultry raiser who would at once secure an excellent market for his products.

THE ORE SAMPLING WORKS.

The Kootenay Ore Company, Limited, have a sampling works, the size of the buildings being 60x80 feet built in terraces on the side hill, hence all the ore is handled automatically. A spur from the K. & S. Ry. delivers the ore at the upper part of the works and after it is crushed, sampled and replaced in its sacks it is loaded on boats from the company's wharf extending from the building out into Kaslo Bay. These works have a capacity of 250 tons per day and are equipped with the best machinery obtainable. There are many advantages to a mining district accruing to a sampling establishment. This goes without saying, but I may be allowed to point out the benefit to a poor man in receiving without delay the value of his ore after it has been passed through the works.

THE ELECTRIC LIGHTING SYSTEM.

The Kootenay electric light and power plant, situated within the city limits, is said by experts to be one of the most complete of its kind to be found on the American continent. The machinery is entirely of Canadian manufacture.

A heavy frame building 30x50 feet with fourteen-foot ceiling encloses the plant, while a pipe forty-five inches in diameter and 1,500 feet in length conducts the water from the substantially constructed head gate on the north side of Kaslo River. The water pressure and immense turbine wheel are capable of developing 300 horse-power, but for the present less than one-half of that power will be required. Power and light can be transmitted for a distance of thirty miles from the works. The system is what is known as the S.K.C. alternating. At present the generator and exciter has a capacity of 2,000 volts, or 1,500 sixteen-candle power lamps. Another of about the same size will be installed about the first of the coming year.

Three No. 6 wires carry the current to the centres of distribution in the city which consist of six transformers where the power is cut down to 100 volts, capable of supplying 250 lights. A marble switch-board 5x6 feet in size and all the latest appliances are in place in the power house. Mr. W. P. Dickson is the manager of this enterprise, and Mr. W. R. McRae, the chief engineer.

MINING CAMPS TRIBUTARY TO KASLO.

Although Kaslo is a mining centre in every sense yet it is eight miles distant from the nearest working mine, the Montezuma, on the South Fork of Kaslo River. Here during the past summer an eighty-ton concentrator has been erected and an aerial tramway 8,500 feet in length to convey ore from mine to mill constructed.

Farther up the South Fork are a number of claims in a more or less advanced stage of development. At the Silver Bell four carloads of ore taken out during the process of development are awaiting shipment. A sixty-ton shipment is being made from the Bismarck, and no doubt ore from the Gibson, Silver Bear and other properties will be raw-hided out in large quantities during the winter. The Black Fox, B.N.A. and other claims here, of which the ore can be treated by concentration will in all probability be productive next season.

On a number of claims at Spring and Bear Creeks, both of which streams empty into Kaslo River at Sproules, much development work has been carried on during the past year. The Carbonate No. 2, on Spring Creek, has commenced shipping high grade ore and likewise the Texas. Messrs. L. R. Lindsay & Co. have developed a valuable property on their two claims called the Alice and Zuni. The Utica on Twelve-Mile, has afforded most excellent results under recent development. The owner of this mine and principal owner in several other claims adjoining, Mr. Patrick McCue, of Kaslo, has done a great deal of development work since he located there in '92. One tunnel follows the vein 250 feet, showing ore for the entire distance. Several open cuts also prove the continuance of the ore body, while a shaft has been sunk to a depth of eighty feet. The veins are from nine to eighteen feet wide, all concentrating ore except that from pay streaks one to three feet wide which carry over 200 ounces of silver per ton and sixty-four per cent. lead. A couple of carloads of rich ore are now on the dump. This property is situated four and a half miles by excellent trail from the K. & S. Railway.

A FAMOUS MINE AND ITS HISTORY.

Whitewater, seventeen miles from Kaslo, is becoming what may be called a pretentious town on account of the several producing and possibly productive mines in its vicinity. One mile north of the railway station and close to the waggon road is the celebrated Whitewater mine for which a most satisfactory record has been established in the past two years, dividends to the amount of about \$100,000 having been paid during that time. Moreover, the owners have every cause to believe that the mine will continue to pay handsome profits at an increasing rate.

The Whitewater was located in '92, a little iron stain on the surface being all that indicated a valuable ore deposit beneath. The discoverer desired to sell and Mr. J. C. Eaton, now the principal owner and manager, visited the claim. The iron stain was found on the top of a small cliff. Mr. Eaton sunk his prospecting pick in the loose earth so as to pull himself up, when his weight on the pick pulled out a piece of galena weighing about forty pounds. On the strength of this he bought the claim for a few hundred dollars. With this same pick Mr. Eaton subsequently dug from the ground seven tons of ore

which netted him over \$900. From the fall of '92 until the winter of '95 but little was done with the property, so it has made its notable record during the past two years.

OTHER MINERAL CLAIMS.

On Jackson Creek, which enters Kaslo River from the south at a distance of five miles by first-rate waggon road, are the Jackson mines, owned by the Jackson Mines Co., Ltd., for which Mr. George Alexander, of Kaslo, is agent. There are five claims in this group which are being thoroughly and systematically developed before extensive concentrating works will be erected to treat the ore. About 3,000 feet of tunnelling has been done on this property.

One and a-half miles above the Jackson mines is the Ophir, owned by Henry Brood and associates, of Spokane. They have been doing development work for six months and have uncovered the famous Blue Bird ledge, having the same quality of ore as found on that property. Work will be resumed in the spring, when it is expected ore may be shipped. The property is developed by a crosscut tunnel and drifts on the vein.

The Stranger, a Crown granted claim, owned by Whittier, Moore and Montgomery, lying between the Blue Bird and the Ophir, is being opened up and a carload of high grade ore has just been shipped.

There are any number of other claims in the vicinity of Whitewater, from some of which more or less ore has been shipped but space limitations do not admit of lengthy reference.

At Bear Lake a full force is at work on the Lucky Jim whence from 100 to 200 tons of concentrating ore are being shipped each day to the Pilot Bay concentrator.

A number of mines in the vicinity of McGuigan Station are being also extensively worked this winter but operations on several have temporarily ceased on account of the danger from snow slides.

THE DRY ORE BELT.

In the dry ore belt which lies to the north of Upper Kaslo, Seaton and Lower Carpenter Creeks a great deal of development work has been done during the past year. But owing to the slump in silver during the summer and the fact that the ore here contains no lead to help pay the expense of mining, no heavy shipments from this section can be recorded.

RANDALL H. KEMP.

FROM REVELSTOKE.

"THE WONDERFUL WAVERLEY."

OUR Revelstoke correspondent writes trenchantly with regard to the alleged statement on the subject of the phenomenal richness of the Waverley mine attributed to Mr. Nagle, erstwhile Mining Recorder at Ainsworth and now a well-known and much respected resident of Revelstoke. Our correspondent's account of his interview with Mr. Nagle does not differ in material particularly from the denial published in the Revelstoke *Herald* that Mr. Nagle was in any way responsible for the grossly exaggerated report on the mine credited to him. From another source we learn that Mr. Nagle is a man of strong common sense and the last person in the world to desire to pose as a professional "boomer." Through no fault of his he has been placed in a very unenviable position by having his name coupled with the shady proceedings of unscrupulous promoters.

Shipping Mines.

From January 1 to December 18, inclusive, the shipments of ore from mines at Rossland to smelters were as follows:

Mine.	Tons.
Le Roi	65,297
War Eagle	6,933
Columbia and Kootenay	2,079
Iron Mask	3,029
Jumbo	91
Josie	385
Cliff	917
Centre Star	1,289
Red Mountain	56
*O.K.	172
Evening Star	79
Giant	21
I.X.L	12
Velvet	10
Little Joe	15
Poorman	120
Lily May	30
Total	70,896
*Concentrates.	

From January 14 to June 19, inclusive, the ore milled in the camp was as follows:

O.K.	2,472
I.X.L.	230
Total	2,702

The shipments of ore for the week ending December 18th, were: Le Roi, 1,590; Iron Mask, 50; War Eagle, 40; Evening Star, 40. Total, 1,720.

The shipments of ore from Sandon from August 1 to December 23, inclusive, 1897, were as follows:

	Tons.
Slocan Star	2,410
Ruth	3,405
Payne	7,040½
Idaho Mines	426
Noble Five	519½
Reco	788½
American Boy	29
Slocan Boy	45
Wonderful	42
Ajax	43
Majestic	12
Freddie Lee	16
Mt. Adams	15
Last Chance	424
Goodenough	15
Canadian Group	20
Sovereign	14
Trade Dollar	15
Queen Bess	20
Miscellaneous	9½
Total	15,309½

OUR SPECIAL KLONDIKE-COAST ISSUE

It has been the practice heretofore of the MINING RECORD to publish a special holiday issue at Christmas time. We have this year departed somewhat from established custom and are pleased to announce that in addition to the regular January number paid-up subscribers to this journal will receive shortly a copy of our special Klondike-Coast edition which is now on the press. The contract for the printing and publishing of this special number was awarded to The Province Publishing Co. of Victoria, and judging from the appearance of a proof copy submitted to us, we are satisfied that the public will be unanimous in pronouncing a favourable opinion upon the manner in which this company has accomplished its part of the work.

BY THE WAY.

It is expected that the aerial tramway from Sheep Camp to Crater Lake over the Chilkoot Pass will be completed and in operation in February.

The invitation proffered by the Bureau of Mines to owners of placer claims to send samples to be tested for platinum and iridium at government expense, has already elicited a number of responses, and parcels of black and grey sand are arriving daily addressed to the Provincial Mineralogist.

The work of converting the old Legislative Hall into a museum for minerals has been commenced. We propose to publish next month the plans showing the arrangement of the building.

We are pleased to note that the article published in the November issue of the *Record* on "M.E.'S and Experts," has been largely copied and commented upon by the leading financial and mining journals of the Continent. The more this question is discussed the better.

It is hoped that the annual returns and statistics from the mines will be published earlier this year than heretofore; mine owners and managers throughout the country having exhibited greater dispatch in responding to the request of the department for information. A penalty of \$100 is exacted for negligence in forwarding the returns required.

Mr. Charles S. Allmen, of Kaslo, manager for the syndicate represented by Mr. Henry Oroft, and operating in Kootenay, has decided to spend the winter at Vancouver. "Mr. Allmen," a correspondent writes, "has established a noteworthy record in Kootenay, reporting favourably on no less than fifty-two properties, all of which have since justified his opinion of their probable value."

A Vernon correspondent, for many years a resident of Japan, and while there engaged on a geographical and commercial history of the Islands, remarks on the difficulty he experienced in obtaining information regarding the Japanese mining industry. He says this may be attributed to fear on the part of government that the mineral wealth of the country would fall into the hands of the "foreign devils," who in ancient times despoiled them of many hundreds of tons (?) of gold and silver, and thousands of tons of copper, which in some Japanese mines is so firm and solid that it has to be sawed out in blocks.

The Golden River Quesnelle have completed a work of some magnitude in damming back the water of Quesnelle Lake, with the purpose of recovering the gold from the channel of the river. The result of a preliminary exploration has been eminently satisfactory, several specimens of coarse gold being found in the gravel.

An annual meeting of the B.C. Association of Mining Engineers will be held in Vancouver on or about the 25th of January. A correspondent and a prominent member of the Association writing to the *Mining Record* on our criticism last month of the lax methods in which the Association is conducted supports the position we assumed. He says: "Although your remarks are rather strong, in my individual opinion they are not altogether undeserved."

A correspondent from Alberni, signing himself "Old Sledge," writes:

On the Regina group a force of twelve men continues to crowd development work with most encouraging results. This group bids fair to be amongst the first paying shippers in the district. At Green Mountain, Alberni Canal, the Alberni Development Syndicate have just opened up a strong body of high grade chalcopryites, and are pushing a cross-cut to determine its extent. Spokane, Seattle and Tacoma capitalists have had experts "rounding up" the district recently, and a number of working bonds have been taken in consequence. Several of the more important negotiations are still pending. In the Clayoquot section work is being pushed at Sydney Inlet, Tranfield Oreek, Bear River, and other points. It is believed that successful shipments will follow from all these points in the early spring.

ANSWERS TO CORRESPONDENTS.

Adam Weir. (Metchosin)—Thanks for prospectus. We agree with you that there appears to be something "fishy" about the concern. Will investigate.

G.H.C. (Greenwood, B.C.)—A typographical error. Should have been printed 20 cents. A. W. More & Co., Victoria.

J.H.R. (Toronto.)—Fully appreciate your kind expressions of approval and congratulation. Will certainly do as you wish.

C. (Victoria.) Yes. Quite agree with you that that letter from "Cautious", to the London *Mining Journal* is very much to the point. If directors of B.C. companies in London would, as he suggests, confine themselves to giving shareholders authenticated reports relating to the development of the

general progress made at these properties, with, of course, any information of practical value, instead of quoting the opinions of irresponsible persons, and predicting all sorts of wonderful things for the future, a great deal more confidence would be placed in their statements.

R.H. (Manchester, Eng.) Better purchase your outfit here. Leave England towards the end of February. Yes.

Investor, (London, Eng.) Wouldn't advise you to buy at any price. Certainly. Some Cariboo investments are very promising.

J.S. (Bagot, Man.) The quotation is quite correct, and shares may be obtained for even less than seventy cents. The fall, however, does not prove that there is anything wrong. A mill test has recently been made, and while no authenticated statement of the result is obtainable, it is rumored that expectations were not quite realized. The property in our opinion is overmuch boomed, and there was really nothing to warrant the rapid rise. There is, however, no reason why it should not prove a valuable property.

CATALOGUES AND PRICE LISTS.

MESSRS. John Taylor & Co., of San Francisco, have issued their sixth catalogue, (illustrated) and price list of assayers' materials, and mine and mill supplies. Among the articles to which special attention is directed is the "Alaska Gold Washer, 1897," a new pattern of a combined rocker and sled. The weight of the contrivance is only thirty-two pounds; it is four feet long by eighteen inches wide. It is furthermore provided with dipper and amalgam scraper, and a compartment is arranged for the bestowal of provisions and a complete kitchen outfit. A great advantage is that the sled may, if desired, be unscrewed and converted into a pack. Another useful appliance is Taylor's patent rock fine-crusher, designed for the use of assayers and prospectors, and sold at the moderate price of \$25.00. With one of these machines a miner, being the lucky discoverer of a rich pocket mine, crushed his own rock and extracted therefrom gold to the value of \$30,000. Although this firm only became incorporated in October last, the business has been conducted by the partners, Messrs. John and Henry R. Taylor, for over forty years, during which time they have succeeded in securing a very large patronage, not only in the United States but in Canada.

We beg to acknowledge with thanks the receipt from the Trenton Iron Co., Trenton, New Jersey, of a cloth-bound and well printed treatise (illustrated from photographs) on the Bleichart system of wire rope tramway. In the back of the volume are numerous testimonials from prominent mine managers.

THE HALL MINES, LTD.

A FOURTH statement of accounts and balance sheet for the year ending 30th September, has been submitted to shareholders by this company, a dividend of 7 per cent. being paid on preference and 10 per cent. on ordinary shares. The statement in brief is subjoined:

Gross income for the year.....	£30,357	8	0
Brought in from last account.....	1,930	6	4
Available.....	£32,287	14	4
Appropriated as follows:			
7 per cent. on Preference.....	£ 1,750		
10 per cent. proposed on Ordinary.....	25,000		
Depreciation of plant, machinery, etc.....	5,489	15	8
Carry forward.....	47	18	8
	£32,287	14	4

THE SEVENTEENTH DIVIDEND.

THE fact that relatively speaking, that lucrative and successfully operated mine, the Cariboo, at Camp McKinney, has been accorded scanty press notoriety, has on more than one occasion formed the subject of comment. The reason, perhaps, may be attributed to the circumstance that very few shares are on the market, by far the larger number being owned by a few private individuals, who have neither reason nor desire to "boom" the stock. This may account for the low price of 52c. at which stock is now quoted. To August of the present year the Cariboo had paid \$156,964 in dividends. Since then a dividend of 2 per cent. on the capital stock was declared, and again in December a like amount of \$16,000. The mine has thus returned no less than \$189,000 in dividends to date. New machinery has been recently installed on the

property, and we are informed there is a large reserve of ore, the workings meanwhile continuing to show well defined bodies of free-milling quartz.

THE WAR EAGLE CONSOLIDATED.

EXCERPT FROM THE DIRECTORS' REPORT.

THE first annual meeting of the War Eagle Consolidated Mining and Development Company, Limited. It was held at the company's offices, Toronto, in December, the directors submitting a very satisfactory report, of which the following is an excerpt:

"The directors having found it impossible under existing conditions to obtain any reduction in the cost of freight and treatment of the company's ores, and feeling that the present rates could not be long maintained in the face of improving railway facilities and the competition likely to ensue thereon, determined in July last to stop shipping altogether, and devote their energies to putting the mine in shape to ship freely when rates were satisfactory.

"Up to that time the company had been shipping about thirty tons a day, chiefly ore encountered in development.

"The policy of withholding the ores from shipment has been abundantly justified by the important announcement since made by the Canadian Pacific Railway, both to your directors and the public generally, that it will at once provide for the transportation and treatment of Rossland ores at cost for the purpose of stimulating the development of that camp.

"What these rates both for freight and treatment will be, your directors are at present unable to announce, but that they will be settled within the next month and that they will be sufficiently below existing rates to justify the company in its policy of non-shipment is not open to doubt.

"In view of the magnitude of the ore reserves on hand and the extent of the development of the War Eagle mine, it will be necessary as soon as possible to double the capacity of our compressor and hoisting plant in order to be prepared to handle our output and maintain our ore reserves.

"In this connection it may be said that the West Kootenay Power & Light Company are installing an electric plant of five thousand horse-power at Kootenay Falls, and have promised power this winter at one-half the cost of steam.

"Altogether, your directors think the shareholders are to be congratulated on the continued improvement in the mine under systematic development."

The following financial statement for the nine months ending 30th September, 1897, was submitted:

Assets.	
Mines and Mineral claims.....	\$1,670,013 14
Cash, on hand and in banks—	
Bank of Montreal, Rossland.....	2,404 01
Bank of Toronto, Toronto.....	994 55
On hand.....	228 05
Mine supplies, etc., on hand—	
Candles.....	51 20
Powder.....	1,791 57
Lumber.....	453 88
Fuel.....	423 75
Lubricating oils.....	389 18
Pipe and fittings.....	630 37
Drill and machine fittings.....	1,507 49
Rolling stock and rail.....	803 84
Permanent Improvements.....	3,131 29
Boarding house improvement.....	25 00
Boarding house supplies.....	1,525 95
Rossland Office furniture and fixtures.....	355 12
Toronto Office furniture.....	301 30
B. C. Smelting & Refining Co., for exchange on ore settlements.....	3 59
Hall Mines, Ltd., for exchange on ore settlements.....	15
	\$1,685,033 41
Profit and Loss.....	40,779 61
	\$1,725,813 02
Liabilities.	
Capital Stock, paid up.....	\$1,659,000 00
George Gooderham.....	75,813 02
	\$1,725,813 02

Profit and Loss Account.

To Cost of Mining, etc.—War Eagle Mine:	
Mine labour.....	\$ 60,894 22
Mine supplies.....	14 216 78
Compressor supplies.....	444 52
Compressor labour.....	2,388 29

Fuel	4,002	74
Office expense	821	76
Salaries	5,503	29
Assaying	1,409	28
General expense	1,287	86
Legal expense	250	45
Surveying expense	429	25
Written off for depreciation in value of permanent improvements, rolling stock, rail, tools, office furniture, etc.	2,980	25
Crown Point Mine:		
Mine labour	\$ 12,624	25
Mine supplies	3,749	13
Compressor labour	2,563	87
Salaries	980	24
Office expense	3	75
Legal expense	334	00
Compressor supplies	90	26
General expense	237	30
Assaying	37	75
Fuel	794	62
Richmond Group:		
Assessment work, etc.	\$ 1,172	60
To Tiger and Uncle Sam	870	25
To general expenses	4,845	16
To Toronto office expenses	860	10
To boarding house labour	259	30
To interest	1,686	70
	\$ 125,746	97
	\$ 68,983	24
By net proceeds of ore sales	15,846	87
By profits of the War Eagle Gold Mining Co., from 1st to 20th January, 1897	137	25
By transfer fees	40,779	61
By Balance		
	\$ 125,746	97

The report of the Mine Manager, J. B. Hastings, showed that on the War Eagle 2,354 feet of tunneling, 371 feet of raising and 175 feet of sinking had been done altogether. The other properties were developed to a lesser degree.

THE WHITE PASS.

TO THE EDITOR:—My attention has been directed to the somewhat intemperate letter of Mr. T. R. E. McInnes, headed "The Impassable Pass," which appeared in your November issue.

I have nothing to withdraw from the statements I made to the shareholders of this Company, and which are challenged by Mr. McInnes, but I think it right to offer a few observations in regard to some parts of Mr. McInnes's letter.

In my opinion, and that of most other persons competent to judge, the White Pass is indicated by nature as "the future highway to the Yukon basin." Time will show who is correct in this respect, and the fact that by far the greater part of the persons forming the unexpected rush of last summer made for Skagway and the White Pass confirms my view. This Company cannot be accused of inviting traffic there this year, as in all our publications and my own speeches the most strenuous advice was given to everyone not to attempt to go in until next year. Mr. McInnes, although referring to my speech, does not do me or this Company the justice of mentioning this.

Now, what are the facts concerning the White Pass? Messrs. Garside, of Juneau, have lately completed their survey of it for the projected railway to Lake Bennett, (44½ miles in length) and the steepest gradient at any point is 3 per cent. That disposes of the question of its fitness for a road or railroad. I understand also that the Government have invited tenders for a wagon road.

We did send out from England a sum of £1,500 for the purpose of making a trail (after applying in vain to the Government to make a wagon road or even a trail) and we have confidence that our officials properly expended the money. The miners rendered much assistance, and built several, though not all, the bridges.

The trail did undoubtedly get into a deplorable condition, as any trail not thoroughly constructed would do under similar circumstances. But this Company cannot be blamed for that; we warned people not to come. We do not profess to be philanthropists, and we consider we did more than could be asked or expected from us in expending the sum I have mentioned.

I should judge from Mr. McInnes' letter that he is not of an age to remember the trail from Quesnelle mouth into

Williams' Creek in '62. I am, and I travelled that trail then and later; it became such a perfect bog, from the nature of the climate and other physical circumstances, that it was utterly impassable for animals, and all goods had to be packed on the backs of men for sixty miles. Yet it became the highway to Cariboo, and a good wagon road was made over it afterwards.

Every unprejudiced person who has been through the White Pass during the recent rush admits that the loss of horses was caused in nearly all cases by total or partial starvation, overwork, and inexperienced packing and driving.

Before the trail was trodden into a quagmire the passage was perfectly easy and was made by several men on horseback in a single day. The only people to blame are the unfortunate persons who neglected good advice and tried to do the impossible.

Before the White Pass route was opened the only other routes spoken of were those by St. Michael's and the Ohilkoot Pass. I presume that Mr. McInnes does not maintain that a horse can get over the Ohilkoot? The White Pass indeed, remains, with the exception of the so-called "All-Canadian" route, via Stickine River, which has only lately come into notice, the *only* route from the Coast which can be used by horses.

Moreover, by continuing the railway for 90 miles (making 135 in all from Skagway), the Hootalinqua River can be reached at a point 30 miles below Teslin Lake, thus also avoiding rapids on the Upper Yukon.

I do not wish to run down the Stickine route, which may also in time prove to be a good one, but I would like to know with what justice it can be called "All-Canadian." According to Dr. Dawson's and other accounts the river is open for about six months in the year and then only for vessels drawing from 2 ft. 6 in. to 4 ft. of water, according to the stage of the latter.

Such a boat cannot be navigated safely from Puget Sound to Vancouver, and thus trans-shipment is clearly necessary. How can this be affected without wharves at the mouth of the river, and on what territory would those wharves have to be built? Probably nothing but a railway to the mouth will be really effective, and in that case a good many miles of its total length of about 300, to the south end of Teslin Lake, would be in U.S. territory.

Now, the land at the mouth of the Stickine is undisputedly American; whilst that at Skagway and to the summit of the White Pass forms the subject of dispute, and is, in fact, the extreme instance of the British case. There is at any rate, a chance of the White Pass becoming an "All-Canadian" route, but none, that I can see, for the Stickine.

I am, sir, your obedient servant,
R. BYRON JOHNSON,
Chairman.

Office of The British Columbia Development Association,
45 Broad Street Avenue, London, E.C.
November 27, 1897.

A PROBABLY RICH BUT YET UNEXPLORED COUNTRY.

TO THE EDITOR: There yet remains within the boundaries of British Columbia a vast tract of country yet practically unexplored. That goes without saying. But a region to which I would specially refer in this letter lies, I believe, within the gold belt, with Omineca on the south and Cassiar on the north, and it is reasonable therefore to believe that rich placer diggings may ere long be discovered on the creeks and rivers of this section.

Another important fact which goes a long way to confirm one in this belief is that for a number of years several miners have made good wages on the Finlay River bars below the canyons, but owing to the turbulence of the waters coming through these canyons they have not as yet been able to make a successful trip to the placid waters beyond, which it is supposed take their rise to the westward and directly in the gold producing regions. In the geological survey of Canada Mr. McConell speaks of the Ingenica, a tributary of the Finlay, as being well worth prospecting, and he further states that good prospects were obtained from two small creeks a few miles below Paul's branch. As the Finlay is not, however, navigable there remains but one other way of getting into the country and that is by an overland journey either in summer or winter.

The winter season is perhaps to be preferred for this trip, which then could be made by way of the Skeena without much difficulty, a dog train being called into requisition. The entire distance by this route would not be more than 250 miles up to the headwaters of the Finlay and the Liard. Of course

such an undertaking would require capital expenditure, and that without any certainty of return, but from some personal acquaintance with the Omineca country I am strongly of opinion this section would well repay a prospector's labour. Meanwhile, could not the Provincial Government be induced to take action towards equipping an expedition to explore this vast unknown territory? Who knows but that here is a region as rich in placer gold as even much boomed Klondike.

J.

FREE MINER'S TAX.

TO THE EDITOR;—The question of taxing all the labour in any way connected with mines, has arisen, and will probably be brought up at the next session of the Legislative Assembly.

There are doubtless some upon whom this tax falls heavily, and to whom it seems an injustice; but in the effort to impose a tax that will bring into the coffers of the province the wherewithal to open ways to the many new camps clamoring for assistance, and pay for the very excellent protection to life and property which our Government affords, some few are bound to suffer, in a measure.

The mining laws of the province, I think it will be generally conceded, are liberal enough, and justly administered, and when you consider that a Canadian is not permitted to prospect for or own mining claims in the United States, it does not seem ungenerous to ask American citizens to contribute \$5.00 annually towards the administration that gives them the privilege of prospecting for and owning mining ground, and protects them while in this country. The alien miner who does not prospect or own an interest in a claim, as a rule has nothing good to say for the country, and also as a rule takes the money he earns here back with him to spend in his own land. Should he not pay a tax?

It has been said "the poor labourer who works at ditching and like work in connection with hydraulic mines, should not be taxed." This I consider more a question of sentiment than sense. These people are, as a rule, if not Chinamen, Japs or Dagos, the most objectionable class of Europeans and Americans on the continent, and belong to the genus "tramp or hobo." I say as a rule, for there are some good men amongst them. These generally find something attractive in the country and stay to prospect, if their good qualities have not already secured them better work at better wages, and they seldom object to the tax, for they generally become the owner of some claim or prospecting proposition, for which they would of course require a license in any case. Of the remainder those who do not take their money out of the country spend it at the nearest "pub.," and beg or "bilk" their way back to a warmer climate for the winter. Tax them! Few good, steady miners will be found who are not working for wages, with the intention of becoming part owners in promising prospects in this country, or working to accumulate means for developing some prospect already struck in the States. The former would pay the tax in any case, and the latter should.

I relate experience gained as a miner working for wages in developing my own claims, and in observing the labourers and miners employed upon neighbouring mines.

On the whole I consider the tax a just one.

There are doubtless other sides to this question; for this reason I write you now, hoping for comment or discussion.

LICENSE No. ———.

[Our correspondent certainly puts a new phase on this much vexed question. But we fear it will take a still more forcible argument to convince us that the principle of taxing labour is right. But, admitting his premises, if it is desirable to impose a tax on mine labourers because a proportion are aliens, why should other trades be exempt? Why not tax farm labourers, carpenters, blacksmiths, among whom a number certainly are not British subjects? We fancy if this was done there would be a very general uproar. However, the matter is well worth discussion, as our correspondent suggests.—Ed.]

FRAUDULENT LOCATION OF MINERAL CLAIMS.

TO THE EDITOR;—Permit me to solicit the aid of your influential journal in a matter seriously affecting the interests of mining men and legitimate mining in the province, to-wit: the fraudulent staking and recording of claims. This has grown to an extent that is fast bringing the law into open contempt. It is the practice not only of irresponsible camp followers and blackguards, but is also done by the apparently respectable representatives of capital. A case came within my knowledge where a claim was purchased by the accredited agent of an English company, who immediately afterwards

staked three claims surrounding his purchase, without even the pretence of having found any mineral in place or otherwise, and a year afterwards the claims were re-staked by his foreman to avoid the assessment law, and unblushingly deeded to his company. These are surely fit circumstances for an inquiry through the Attorney-General's office. Claims are daily staked under two feet of snow, and invariably adjoining a claim that somebody else's money or labour has proved valuable, the intention patent being, in addition to stealing the claim from the public (for stolen it certainly is) to cinch a portion of the profits of another's industry. I beg to suggest a remedy which, if novel, has many claims to the consideration of the lawmakers, besides affording an antidote against staking according to law.

I would compel everyone desiring to record a mining claim, to furnish the recorder with good samples, of fair size, suitable for the Government Museum, of the mineral he is staking on, and an affidavit that these samples came from a ledge in the ground recorded. This would afford a sure ground for prosecution in case of fraudulent record, would be no trouble to the prospector, who must attend the office in any event, and would provide the Government in twelve months with a collection worthy the province, and of greater aggregate value than can be otherwise obtained without cost.

Kamloops, B.C.

W. THOS. NEWMAN.

PUBLICATIONS.

"Manual of assaying Gold, Silver, Lead, Copper," by Walter Lee Brown; E. H. Sargent and Company, Chicago, Ill. The popularity of this admirable work is attested from the fact that it has already run through six editions and a seventh has now been issued from the press. In this edition no material changes occur, with the exception that the introductory chapter has been re-written, and in Part I. dealing with "apparatus and re-agents" more recent inventions in appliances are described. The volume is divided into two parts and an appendix Part I. containing chapters on "Apparatus used in Assaying," "Re-agents used in Assaying" and "Testing of Re-agents." Part II. deals with the assaying of (1) gold and silver ores, (2) copper ores and (3) lead ores. The appendix treats of "Special Methods," "Lists and References" and "Tables." The book is essentially written for beginners and those who, "having had no previous technical or especially scientific education desire to learn something of the practical assaying of gold and silver ores." At the same time it is a work that advanced students and even practical metallurgists will find exceedingly valuable for purposes of reference.

"The Year Book of British Columbia and Manual of Provincial Information," by R. E. Gosnell, Librarian Legislative Assembly and Secretary Bureau of Statistics, Victoria, B.C., 1897. The Government of British Columbia has established a well-deserved reputation for the painstaking manner in which official reports and statistical information concerning the industrial and political affairs of the Province are prepared and the regularity and frequency wherewith these are presented to the public. But there can be no question that Mr. Gosnell's "Year Book" in point of excellence both as regards the information it contains and typography and binding, is very far in advance of any officially authorized publication which has yet appeared. The work is very fittingly dedicated "to the best interests of Her Majesty's subjects in British Columbia," and the hope is expressed that for them "1897 may be but the beginning of a truly Victorian era of Progress." Judging, meanwhile, from the remarkable provincial industrial advancement of the past twelve months, as shown by the statistical tables to be found in the volume, there is a reasonable probability that such will be the case.

The opening chapters are devoted to an exceedingly interesting historical review of the white settlement of the Pacific Coast, from the discovery of Mexico by the Spaniards in the sixteenth century to the story of the completion of the Canadian Pacific Railway to Vancouver, British Columbia, in 1886; the press in B.C.; explorers, travellers and fur traders; founding of forts; place names—their significance; early issues of postage stamps and rates of postage. In this last chapter we are informed that in the year 1860 the cost of sending a letter not exceeding half an ounce in weight from British Columbia to Great Britain was thirty-four cents; nine years later this was reduced to twenty-five cents. In the colony of British Columbia before the union with Vancouver Island took place the charge of sending a letter from New Westminster to Hope was five pence, and a newspaper two pence half penny; from New Westminster to Lytton a shilling, to Quesnelle three shillings, and to Antler, Cariboo, four

shillings. The volume furthermore contains an admirable article by Mr. H. B. Hobson, brother of the well-known engineer of the Cariboo hydraulic mine, on the "First Gold Excitement," from which we reproduce the following characteristic anecdotes: "In 1858 the first Gold Commissioner was appointed at Lytton, being a Frenchman named Captain Trevalis, a very eccentric character. At one time he confiscated a lot of whiskey brought in overland from Oregon. In long winter evenings when the boys got dry they would visit the Captain and express doubts as to whether the seizure was genuine liquor, and to prove the matter the captain would tap a barrel and sample it with them, the result being that the fumes frequently overcame him and the boys would have to put the Gold Commissioner to bed." And here is a second: "Another eccentric character of these early days was Judge Cox, who left California during the excitement of 1858 for Victoria, and having no money to pay his passage from San Francisco shipped on board a sailing vessel as cook, but when eight bells struck and the sailors went to the galley for their dinner they found nothing ready. This riling the hungry sailors, they went to the captain with their complaint. The captain ordered Cox to appear before him, and then Cox admitted that he knew nothing about cooking, but said he was broke and wanted to get to Victoria. The ship being at sea, Cox could not be put ashore, and the captain finding that Cox was an Irish gentleman in reduced circumstances made the best he could of his bargain and took him into his cabin to straighten out his accounts. After Cox arrived in Victoria Governor Douglas appointed him customs house officer at Yale. He was afterwards appointed Gold Commissioner at Williams' Creek. . . . On one occasion he was trying a case when both plaintiff and defendant swore they were the rightful owners of a certain mineral claim. Judge Cox gave his novel decision thus, that both men start from the Court House together, get an axe apiece and run two miles to the ground in dispute, and the man who drove the first stake to get the ground." Could any decision be fairer? Mr. Hobson concludes his article by intimating that under the present conditions, there is now on Williams' Creek a greater surety of permanent successful operation than was had under the limited, but prosperous times of '61 and '62, and that there is also a possibility that equally as rich diggings will be found now as then.

THE MINING INDUSTRY.

Although much space has been apportioned in this volume to chapters on the valuable agricultural timber, fishing and sealing interests of the Province, a very much larger proportion of the book quite rightly is given up to description and statistical information regarding that most important of all our industries upon the successful development of which entirely perhaps the future of the country depends, and to which its present prosperity may be attributed—the mining industry. Speaking of the general condition of mining in British Columbia, Mr. Gosnell refers to the difficulty of interesting capital in metalliferous mine enterprises at the not far distant date of eight years ago, and of the sceptical reception accorded the reports that began to be floated, of discoveries of rich quartz deposits. "Much was heard at that time," he says, about "broken formations" and "refractory ores," "which in public esteem rendered the rich surface exposures extremely unsafe as a criterion by which to determine what might lie underneath." At last extraordinarily promising discoveries were made in Slocan, on Toad Mountain, and in the Trail district, and the facilities of communication and transportation, to the lack of which the author assigns the hesitation of capital to enter into mining ventures, were supplied. Hereafter progress was rapid. Mr. Gosnell reproduces in his "Year Book" those interesting articles on the "Early History of Mining," contributed by him to the *Mining Record* last year, and which were so appreciated at the time of their publication. Then follow brief chapters on the respective mining districts, the information being compiled largely from Mr. Carlyle's reports, Dr. Dawson's "Mineral Wealth of British Columbia," the "Summary Reports" of Mr. McConnell of the Canadian Geological Survey of Canada, and from other reliable sources. "Mining Statistics to Date" afford material for the most instructive study. Table III compares the amount and value of mineral, coal, and coke productions during the years 1895 and 1896. Here the increase in value is shown to be a million and a half dollars, notwithstanding the fact that the coal production was a hundred thousand tons less in 1896 than in the former year. As demonstrating the great development of the provincial quartz mining industry since 1887, we give Mr. Gosnell's figures from page 391, Table VI

PRODUCTION OF LORE MINES.

YEAR.	GOLD.		SILVER.		LEAD.		COPPER.		TOTAL VALUES.
	Oz.	Value.	Oz.	Value.	Pounds.	Value.	Pounds.	Value.	
1887		\$	17,690	17,331					\$ 17,331
1888			79,780	75,000					75,000
1889			53,192	47,873					47,873
1890			70,427	73,948					79,753
1891			4,500	4,000	113,000	5,805			29,607
1892			27,160	66,935	588,665	25,607			139,440
1893			22,000	195,000	1,768,420	72,595			297,400
1894	1,170	23,404	746,379	470,219	2,135,023	78,996			16,234
1895	6,252	125,014	1,496,522	977,229	16,475,464	532,255	324,680	16,234	781,342
1896	39,264	785,271	1,496,522	977,229	16,475,464	532,255	952,640	47,642	2,342,397
1896	62,259	1,244,180	3,353,343	2,100,689	24,199,977	721,384	3,818,556	190,926	4,257,179
T'ls	108,945	2,177,869	5,997,993	4,028,224	50,943,072	1,606,427	5,096,076	254,802	8,067,322

But the comparative statement of ore exported for ten months of the years 1896 and 1897, gives even more satisfactory assurance of progress. See following table:

COMPARATIVE STATEMENT OF ORE EXPORTED FOR TEN MONTHS, 1896-1897.

MONTH.	1886.		1897.		1897.		Increase per Month
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
January	1,103	1,481	2,644	842	948	2,162	
February	1,408	1,551	3,583	1,215	1,825	2,402	
March	1,545	863	3,383	415	1,831	2,978	
April	478	309	1,088	170	1,024	1,195	
May	253	595	1,167	200	824	846	
June	493	234	1,686	1,547	1,646	3,557	
July	583	665	3,910	313	1,617	1,671	
August	1,565	796	4,019	63	882	1,822	
September	1,660	560	3,780	133	63	1,684	
October	762	1,056	4,225	38	20	2,525	
Totals	8,675	6,819	28,567	4,228	93,47	19,726	

1896.	1897.	Total ore exported (ten months) 1897.	Tons.
Total ore treated, 1896.	67,031	Value	42,210
Total ore treated, 1897.	67,031	Average value per ton.	\$3,042,268.69
			72,074

Produce of Smelters (shipped) to Nov. 1, 1897—
 Nelson (Hall Mines) matte..... 2,576 1/2 Tons.
 Trail, matte..... 4,664 1/2
 Total value..... \$3,689,682.06
 " " of ore and matte exported..... 6,731,950.65
 " " to November 6 exceeds..... 7,000,000

Since October, however, over 10,000 tons of ore have been exported, bringing the total value for the year's production to over \$8,000,000. By reference again to Table VI, it will be seen that eight million dollars represents the aggregate value of lode mine productions for the nine years quoted, hence during the past year the production has not only been double that of the year preceding, and quadruple that of two years ago, but it actually has been equal to the record of the years since the inception of the industry. One could hardly wish for a more satisfactory showing.

Under the head of "Wage Rates" we find that in the coal mines of Vancouver Island, at Union, the Mongolian employees actually outnumber the white miners. Albeit the proportion of colliery workers, including the other districts of West Wellington, Nanaimo, and Wellington, is 50 per cent. in favor of white labour. In this connection it is interesting to learn from another tabulated statement that while the white population of the Province increased five-fold and the Chinese two-fold, in a period of ten years, the native population has decreased at the rate of over 8 per cent. Another fact not generally known is that the Chinese population in the Cariboo districts is very nearly as great as the white, and that the Indians considerably outnumber both races together.

The volume concludes with a description of the Canadian Yukon and the principal routes from Dr. Dawson's and Mr. Ogilvie's reports. Two excellent maps, one of the Yukon and the other of the mining divisions of West Kootenay also accompany the book, which is handsomely illustrated with engravings from photographs throughout.

We can only offer our sincere congratulations to Mr. Gosnell for the admirable manner with which he has performed a task requiring obviously so much research and persistent application. Most of his work on the book, Mr. Gosnell tells us, was done after he had completed his daily official routine duties, and this makes the result even more creditable. We have, however, one suggestion to offer the editor of the "Year Book," and that is that he should in future issues include a comprehensive index. An improvement might also possibly be effected by a more consecutive arrangement of the subjects dealt with.

It is to be hoped that there will be a large list of subscribers to this volume, not only because of its intrinsic value for

reference purpose to any one who is interested in the country, but also in recognition of the praiseworthy aim Mr. Gosnell has in view, of devoting the proceeds of sales towards the Provincial Library fund.

STOCK MARKET.

The Hall Mines have declared a dividend of £26,750 which ought to create a demand for the shares of that Company, but these are mostly held in the British Isles. Hall Mines quoted in London at £1.15.

The Cariboo of Camp McKinney has paid another dividend of \$16,000, making a total in dividends to date of \$189,000. The shares of this Company are held as an investment with very few offering at 53 cents. They are looked upon as a good investment at this figure, as the Company is paying dividends at the rate of 12 cents per share per annum.

The Reco has declared another dividend of \$100,000, payable in January. Reco shares are quoted at \$1.70.

Some disappointment has been expressed with the result of the clean-up of the mill of the Golden Cache, and this Company's shares have fallen from \$1.80 to \$1.25. Some are sold as low as \$1.10 per share during the last week in December.

The principal shares selling during December have been the following: Monte Cristo, Josie, Victoria-Texada, Golden Cache, Noble Five, Poorman, Deer Park, and Great Western. Several blocks of Consolidated Alberni changed hands at a very cheap figure and if certain rumours mature the purchasers will realize immense profits.

In Victoria the best seller has been Victoria-Texada, owing to rumours that an English syndicate was about to purchase the whole property belonging to this Company for \$75,000 cash.

Owing to the Noble Five Company going into liquidation the stock of this Company has gone down to 14 cents. Some sales have taken place as low as 10 cents and it appears that certain parties are buying in all the cheap stock with a view to owning the property, we should presume, notwithstanding the fact that a liquidator has been appointed.

We are pleased to report quite a demand for mining stocks during December, and there is no doubt but that next spring will see the market more active than ever in B.C.

The Royal Electric Company

MONTREAL, QUEBEC.

— MAKERS OF —

Electrical Mining Machinery

MOTORS

Adapted for Operating Stamps, Compressors, Hoists, Trams, Drills, Pumps.

Lighting Plants for Mines and Buildings.

OUR S. K. C. SYSTEM

RENDERS DISTANT WATER POWERS AVAILABLE
FOR ALL CLASSES OF MINING WORK.

— WRITE OUR BRITISH COLUMBIA BRANCHES AT —

Rossland.

36 Government St., Victoria.

Mining Stocks.

Prepared by A. W. More & Co., Mining Brokers, Victoria, B.C., Dec. 24, '97

Company.	Capital.	Par Value.	Price.
TRAIL CREEK.			
Alberta.....	\$1,000,000	\$1	\$ 10
Big Three.....	3,500,000	1	10
Bruce.....	1,000,000	1	10
Butte.....	1,000,000	1	02
Caledonia Con.....	600,000	1	05
California.....	2,500,000	1	15
Camp Bird.....	1,000,000	1	05
Celtic Queen.....	750,000	1	04
Centre Star.....	500,000	1	25
Colonna.....	1,000,000	1	18
Commander.....	500,000	1	12
Deer Park.....	1,000,000	1	20
Enterprise.....	1,000,000	1	7½
Evening Star.....	1,000,000	1	15
Georgia.....	1,000,000	1	10
Gertrude.....	500,000	1	15
Golden Drip.....	1,000,000	1	8
Great Western.....	1,000,000	1	10
Hattie Brown.....	1,000,000	1	05
High Ore.....	500,000	1	10
Imperial.....	1,000,000	1	20
Iron Horse.....	1,000,000	1	32
Iron Mask.....	500,000	1	10
I.X.L.....	1,000,000	5	28
Josie.....	700,000	1	70
Jumbo.....	500,000	1	8 50
Le Roi.....	2,500,000	1	20
Lilly May.....	1,000,000	1	15
Mabel.....	1,000,000	1	11
Mayflower.....	1,000,000	1	19
Monita.....	750,000	1	23
Monte Cristo.....	1,000,000	1	08
Morning Star.....	1,000,000	1	05
Nest Egg-Firefly.....	1,000,000	1	10
Northern Belle.....	1,000,000	1	05
Novelty.....	1,000,000	1	05
Palo Alto.....	1,000,000	1	12
Phoenix.....	500,000	1	11
Poorman.....	1,000,000	1	22
Red Mountain View.....	1,000,000	1	05½
Rossland, Red Mountain.....	1,000,000	1	12½
St. Elmo.....	1,000,000	1	10
St. Paul.....	500,000	1	05
Silverine.....	1,000,000	1	16
Virginia.....	500,000	1	1 00
War Eagle Consolidated.....	2,000,000	1	20
West Le Roi.....	500,000	1	19
White Bear.....	2,000,000	1	
AINSWORTH, NELSON AND SLOCAN.			
American Boy.....	1,000,000	1	15
Fern Gold.....	2,000,000	0 25	60
Ibex of Slocan.....	300,000	0 25	2½
Arlington.....	1,000,000	1	13
Argo.....	100,000	0 10	10
Athabasca.....	1,000,000	1	30
Back Hills.....	100,000	0 10	10
Buffalo of Slocan.....	150,000	0 25	30
Canadian M. M. and S. Co.....	2,000,000	1	07½
Cumberland.....	500,000	10	
Dardanelles.....	1,000,000	1	14
Dellie.....	750,000	1	12
Eldon.....	1,000,000	1	05
Elise.....	1,000,000	1	04
Elien.....	1,000,000	1	07½
Elkhorn.....	1,000,000	1	10
Exchequer.....	1,000,000	1	10
Goodenough.....	800,000	1	25
Gibson.....	650,000	1	17½
Grey Eagle.....	750,000	1	
Hall Mines.....	300,000	£1	9 50
Idler.....	1,000,000	1	12½
London.....	150,000	1	25
Minnesota.....	1,000,000	1	25
Nelson-Poorman.....	250,000	0 25	25
Northern Light.....	250,000	1	16½
Noble Five Con.....	1,200,000	1	14
Ottawa and Ivanhoe.....	1,000,000	1	12½
Phoenix Consolidated.....	1,000,000	1	07
Rambler Con.....	1,000,000	1	35
Reco.....	1,000,000	1	1 70
Slocan-Reciprocity.....	1,000,000	1	06
Slocan Star.....	500,000	50	2 50
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	06
St. Keveine.....	1,000,000	1	06
Sunshine.....	600,000	10	
Two Friends.....	240,000	30	17
Washington.....	1,000,000	1	25
Wonderful.....	1,000,000	1	05
LARDEAU.			
Consolidated Sable Creek Mining Co.....	1,500,000	1	10
TEXADA ISLAND.			
Texada Proprietary.....	250,000	25	25
Van Anda.....	5,000,000	1	05½
Victoria-Texada.....	150,000	0 25	25
Texada Kirk Lake.....	600,000	1	1 00
Raven.....	1,000,000	1	10
Gold Bar.....	100,000	0 10	10

VANCOUVER ISLAND.			
Alberni Mountain Rose.....	250,000	1	05½
Consolidated Alberni.....	500,000	1	11
Mineral Creek.....	500,000	1	05½
Mineral Hill.....	750,000	1	05
Quadra.....	500,000	1	10
CARIBOO.			
Cariboo Gold Fields Ltd.....	£100,000		
Cariboo Hydraulic.....	800,000		
Horsefly Hydraulic.....	200,000		
Horsefly Gold Mining Co.....	1,000,000	10	8 00
Cariboo M. & D. Co.....	300,000	1	25
Golden River Quesselle.....	£350,000	£1	2 75
Victoria Hydraulic.....	300,000	1	85
LILLOOET DISTRICT.			
Golden Cache.....	500,000	1	1 25
Alpha Bell.....	500,000	1	50
Cayoosh Creek Mines.....	500,000	1	50
Lillooet Gold Reefs.....	200,000	1 25	25
Excelstor.....	500,000	1	50
FAIRVIEW CAMP.			
Tin Horn.....	200,000	0 25	65
Winchester.....	250,000	0 25	82
BOUNDARY.			
Old Ironsides.....	1,000,000	1	10
Golden Crown.....	1,500,000	1	25
Boundary Creek M. & M. Co.....	1,500,000	1	10
CAMP MCKINNEY.			
Cariboo.....	800,000	1	53

Dividends declared to date are as follows: Le Roi, \$675,000; War Eagle, \$217,500; Cariboo, \$189,000; Slocan Star, \$400,000; Reco, \$250,000; Rambler Cariboo, \$40,000; Idaho, \$152,000. Alamo, Cumberland, Noble Five Payne and Goodenough have also paid dividends.
Dividends paid since last returns: Cariboo \$16,000; Hall Mines, £25,000; Reco, \$100,000; Le Roi, \$50,000.



IN THE MATTER OF THE "PLACER MINING ACT (1891) AMENDMENT ACT, 1895" (SECTION 13), AND OF THE "MINERAL ACT, 1896" (SECTION 161).

NOTICE is hereby given that His Honour the Lieutenant-Governor-in-Council has been pleased to repeal the regulation of the 11th day of December, 1896, with regard to relief against forfeiture owing to the lapse of a Free Miner's Certificate heretofore in force, and to make the following regulation in respect thereof, such repeal and new regulation to take effect on the 15th day of November, 1897:

Any person or joint stock company, being the holder of any mining property, desiring relief against the forfeiture of his or its interest in such property by reason of an omission to obtain a new free miner's certificate on or before the day following the expiration of the certificate, shall observe the following conditions:

1. Forthwith upon ascertaining the expiry of his certificate obtain a new one;
2. At the time of obtaining such new certificate file with the Recorder issuing the same, and post in the Record Office, a notice of his intention to apply for relief;
3. Within 30 days from such filing, transmit to the Minister of Mines the following documents and fee:—
 - (a) A statutory declaration setting forth the circumstances of such omission, with full particulars of the mining properties held by the applicant which would be affected with forfeiture;
 - (b) A certificate under the hand of the Gold Commissioner or Mining Recorder of each division wherein any of the said properties is situate, that notice has been posted, and that no records (other than those mentioned in the said certificate, if any) adverse to the applicant's interest in the said properties have been made by him during the time in which the said applicant was not in possession of a valid existing free miner's certificate;
 - (c) A declaration by the applicant, or his agent duly cognizant of the location on the ground of the applicant's properties, and the other facts affecting the case, that he has searched the records of claims recorded during the interval the applicant was in default, and that such claims do not (except as may be therein stated) conflict with or overlap any of the properties of the applicant;
 - (d.) The sum of five dollars.

The Minister of Mines may thereupon give instructions for the alteration of the date of the applicant's free miner's certificate so as to conform with the date of the expiration of the lapsed certificate, and may also give instructions for such amendment to be made to the records affected as may be considered requisite, and any such relief may be partial as to properties in respect whereof relief is given, or so as to save adverse rights acquired during default of the applicant.

JAMES BAKER,
Provincial Secretary and Minister of Mines.

TELEGRAMS: "Suasible," London.

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[L.S.]

THOS. R. McINNES.

CANADA.

PROVINCE OF BRITISH COLUMBIA.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, QUEEN, Defender of the Faith, &c., &c., &c.

To Our faithful the Members elected to serve in the Legislative Assembly of Our Province of British Columbia at Our City of Victoria—GREETING.

A PROCLAMATION.

A. G. SMITH. } WHEREAS We are desirous
Deputy Attorney-General. } and resolved, as soon as may be, to meet Our people of Our Province of British Columbia, and to have their advice in Our Legislature:

NOW KNOW YE, that for divers causes and considerations, and taking into consideration the ease and convenience of Our owing subjects, We have thought fit, by and with the advice of Our Executive Council of the Province of British Columbia, to hereby convoke, and by these presents enjoin you, and each of you, that on Thursday, the Tenth day of the month of February, one thousand eight hundred and ninety-eight, you meet Us in Our said Legislature or Parliament of Our said Province, at Our City of Victoria, FOR THE DISPATCH OF BUSINESS, to treat, do, act, and conclude upon those things which in Our Legislature of the Province of British Columbia, by the Common Council of Our said Province may, by the favour of God, be ordained.

IN TESTIMONY WHEREOF, We have caused these Our Letters to be made Patent, and the Great Seal of the said Province to be hereunto affixed: WITNESS, the Honourable THOMAS R. McINNES, Lieutenant-Governor of Our said Province of British Columbia, in Our City of Victoria, in Our said Province, this thirtieth day of December, in the year of Our Lord one thousand eight hundred and ninety-seven, and in the sixty-first year of Our Reign.

By Command.

JAMES BAKER,

Provincial Secretary.

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 33 " " " " Nelson
 36 " " " " Kaslo
 36 " " " " Grand Forks

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 Kettle River Districts by travelling via

The Northern Pacific Railway

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TRAVELLERS from the East or from the West will find this the Quickest and most
 Comfortable Route to the Gold and Silver Districts of British Columbia. . . .

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 Nelson, Kootenay and Kettle River points, 4.00 p.m. This card subject to change without notice.
 Through tickets to Japan and China via the Northern Pacific Steamship Co.
 For full information, Time Cards, etc., call on, or address

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MONTREAL

D. McNICOLL,
 General Passenger Agent,
MONTREAL

TRANSPORTATION COMPANIES.

Canadian Pacific Navigation Co., Ltd.

TIME TABLE NO. 28.
(Taking effect December 28th, 1896.)

VANCOUVER ROUTE.

VICTORIA TO VANCOUVER daily except Monday at 1 o'clock.
VANCOUVER TO VICTORIA daily except Monday at 13 o'clock or on arrival C.P. Railway No. 1 Train.

NEW WESTMINSTER ROUTE.

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

FOR PLUMPER PASS—Wednesdays and Fridays at 7 o'clock.
FOR MORESBY AND PENDER ISLANDS—Fridays at 7 o'clock.
LEAVE NEW WESTMINSTER—For Victoria Monday at 13:15 o'clock. Thursday and Saturday at 7 o'clock.

FOR PLUMPER PASS—Saturday at 7 o'clock.
FOR PENDER 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 7 o'clock during river navigation.

ISLANDS ROUTE.

Steamer "Rainbow" leaves Vancouver on Monday at 12 noon and Thursday at 10 a. m. for Texada, Shoal Bay and way landings.

NORTHERN ROUTE.

Steamships of this Company leave Victoria for Fort Simpson via Vancouver and intermediate ports on the First and Fifteenth of each month. If sufficient inducements offer, will call at points on the West Coast and Queen Charlotte Islands.

BARCLAY SOUND ROUTE.

Steamer "Willipa" leaves Victoria for Alberni and Sound ports the 10th, 20th and 30th of each month, and for Quatsino and Cape Scott on 30th. The Company reserve the right of changing this Time Table at any time without notification.

G. A. CARLETON, General Agent. JOHN IRVING, Manager.

For Puget Sound Points

~~~~~TAKE THE FINE STEAMER~~~~~

CITY OF KINGSTON

Speed, 18 knots.	8.00 a.m. Lv 110 11.00 a.m. Lv 38 1.45 p.m. Lv 82 4.00 p.m. Ar 110	Lv M 11 Pt. Townsend Seattle Tacoma	*Victoria 72 28 M 1	Ar 3.45 a.m. 1.00 a.m. 10.00 p.m. 8.00 p.m.	Tonnage, 1147.
---------------------	---	--	------------------------------	--	-------------------

Steamer City of Kingston makes connection at Tacoma with Northern Pacific trains to and from points East and South.

*Daily except Sunday.

E. E. BLACKWOOD, Agent. VICTORIA, B.C.

Spokane Falls & Northern, Nelson and Fort Sheppard, Red Mountain Railways.

The only all-rail route without change of cars between Spokane, Rossland and Nelson; also between Nelson and Rossland.

DAILY EXCEPT SUNDAY.

Leave.	Spokane	Arrive.
7:30 a.m.	7:00 p.m.
10:30 a.m.	Rossland	3:25 p.m.
9:00 a.m.	Nelson	5:20 p.m.

Close connections at Nelson with steamer for Kaslo and all Kootenay Lake points. Passengers for Kettle River and Boundary Creek connect at Marcus with stage daily.

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P.O. Drawer 754.

Vancouver, B.C.

The Columbia & Kootenay Steam Navigation Co., Ltd.

TIME TABLE NO. 10.
In effect June 8th, 1896.

ARROWHEAD-TRAIL ROUTE, STEAMER "NAKUSP."

South bound; read down.	North bound; read up
Mon. Wed. Fri. 7 p.m. De ARROWHEAD	Ar 11.30 a.m. Wed. Fri. Sun
" " " 11 p.m. Ar	De 7.30 a.m. " " "
" " " 12 m. De	Ar 6 a.m. " " "
Tues. Thurs. Sat. 9 a.m. Ar	De 8.30 p.m. Tues. Thurs. Sat
" " " 12 noon De	Ar 8 p.m. " " "
" " " 2 p.m. Ar	De 4.30 p.m. " " "

Connections at Arrowhead with C.P.R. to and from Revelstoke and all points east and west. At Nakusp with Nakusp & Slocan R. to and from Slocan points; at Robson with C. & K. R. to and from Nelson and Kootenay Lake points; at Trail with C. & W. R. to and from Rossland; at Trail with Str. "Trail" to and from Waneta, Northport and Spokane.

TRAIL-NORTHPORT ROUTE, STEAMER "TRAIL."

Daily except Sun.	8 a.m. De TRAIL	Ar 4.30 p.m.
	9 a.m. Ar WANETA	De 3 p.m.
	10 a.m. Ar NORTHPORT	De 1 p.m.

Connections at Northport with S.F. & N.R. to and from Spokane and way points; at Trail with C. & W. R. to and from Rossland, and with Str. "Nakusp" to and from Robson, Nakusp and Revelstoke.

KOOTENAY LAKE ROUTE, STEAMER "KOKANEE."

Daily except Sun.	4.00 p.m. De NELSON	Ar 9.30 a.m.
	8 p.m. Ar KASLO	De 5.30 a.m.

Saturday, June 6th and every second Saturday following, steamer leaves Kaslo at 10 p.m. for Bonner's Ferry; returning leaves Bonner's Ferry Sun. at noon. Connections at Nelson with C. & K. R. to and from Robson, Trail, Rossland, Nakusp, Revelstoke and C.P.R. points; at Nelson with N. & F.S.R. to and from Spokane and way points; at Kaslo with K. & S. R. to and from Slocan points; at Bonner's Ferry with G.N.R.

The right is reserved to change this schedule at any time without notice. For tickets, rates, etc., apply at Company's office, Nelson.

T. ALLAN, SECRETARY. J. W. TROUP, MANAGER, Nelson B.C.

INTERNATIONAL NAVIGATION & TRADING COMPANY, LTD.

Steamers "International" and "Alberta" on Kootenay Lake and River.

TIME CARD IN EFFECT 1st OCTOBER, 1897.

Subject to Change without Notice.

Five-Mile Point Connection with all Passenger Trains of N. & F. S. R'y. to and from Northport, Rossland and Spokane.

Tickets sold and Baggage Checked to all U.S. Points.

Leave Kaslo for Nelson and Way Points, daily except Sunday, 5.45 a.m.

Arrive Northport, 12:15 p.m.; Rossland, 3:40 p.m.; Spokane, 6 p.m.

Leave Nelson for Kaslo and Way Points, daily except Sunday, 4.45 p.m.

Leaving Spokane, 8 a.m.; Rossland, 10:30 a.m.; Northport, 1:50 p.m.

NEW SERVICE ON KOOTENAY LAKE.

Leave Nelson for Kaslo, etc., Tues., Wed., Thurs., Fri., Sat., 8:30 a.m.

Arrive Kaslo, 12:30 p.m.

Leave Kaslo for Nelson, etc., Mon., Tues., Wed., Thurs., Fri., 4:00 p.m.

Arrive Nelson, 8:00 p.m.

BONNER'S FERRY AND KOOTENAY RIVER SERVICE.

*Leave Kaslo, Sat., 4 p.m. Leave Bonner's Ferry, Sun., 1 p.m.

Arrive Boundary, Sun., 12 p.m. Arrive Boundary, Sun., 5 p.m.

Arv Bonner's Ferry, Sun., 10:30 a.m. " Kaslo, Sun., 10 p.m.

Close connection at Bonner's Ferry with trains East bound, leaving Spokane 7:40 a.m., and West bound, arriving Spokane 7 p.m.

*The Alberta awaits the arrival of the International before leaving for Bonner's Ferry.

GEORGE ALEXANDER, General Manager.

Kaslo, B.C., 12th July, 1897.

Change in Time Card

After end of October, the SS. Alberta passenger service, leaving Nelson 8 a.m. and Kaslo 4 p.m., will be discontinued.

Kaslo & Slocan Railway.

TIME CARD.

Subject to change without notice. Trains run on Pacific standard time

Going west.	Kaslo	Going east.
Leave 8.00 a.m.	Arrive 3.50 p.m.
" 8.36 " "	South Fork	" 3.15 "
" 9.36 " "	Sproule's	" 2.15 "
" 9.51 " "	Whitewater	" 2.00 "
" 10.03 " "	Bear Lake	" 1.48 "
" 10.18 " "	McGuigan	" 1.33 "
" 10.38 " "	Cody Junction	" 1.12 "
Arrive 10.50 "	Sandon	Leave 1.00 "

CODY LINE.

Leave 11.00 am Sandon

Arrive 11.20 a.m. Cody

ROBT. IRVING, G. F. & F. A.

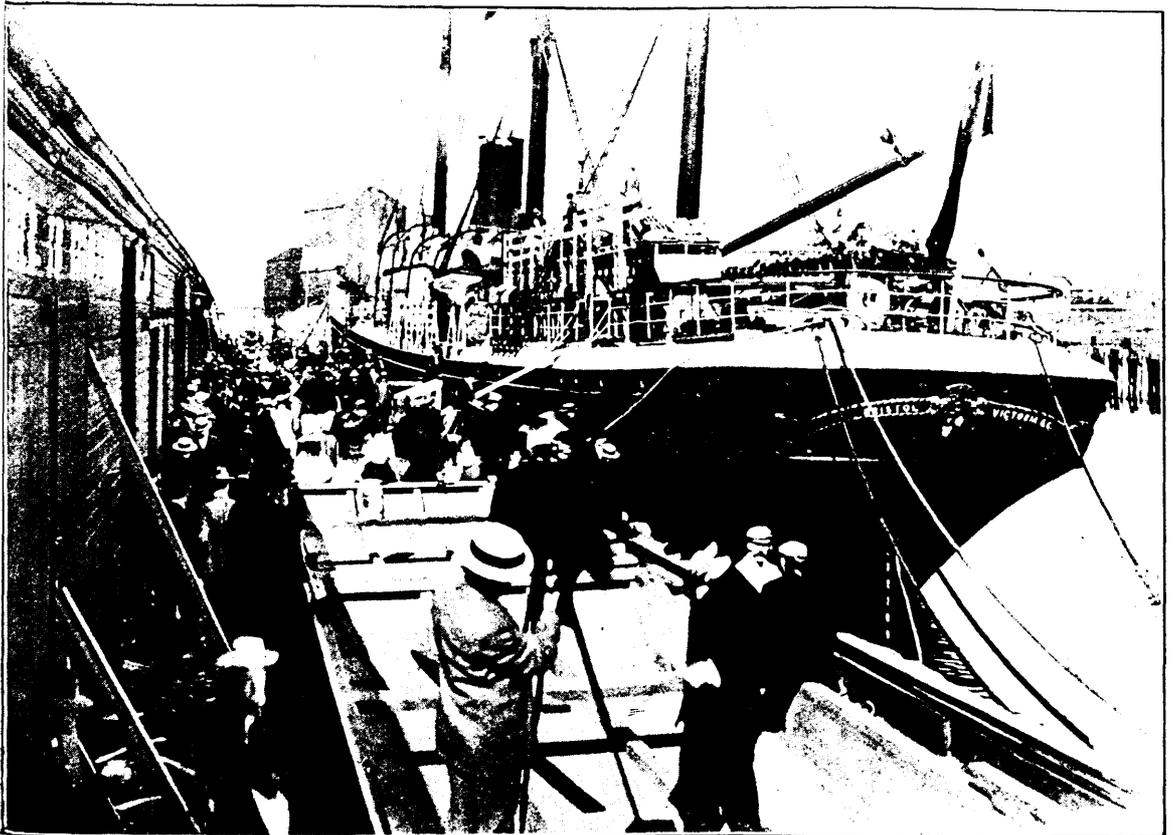
GEO. F. COPELAND, Superintendent.



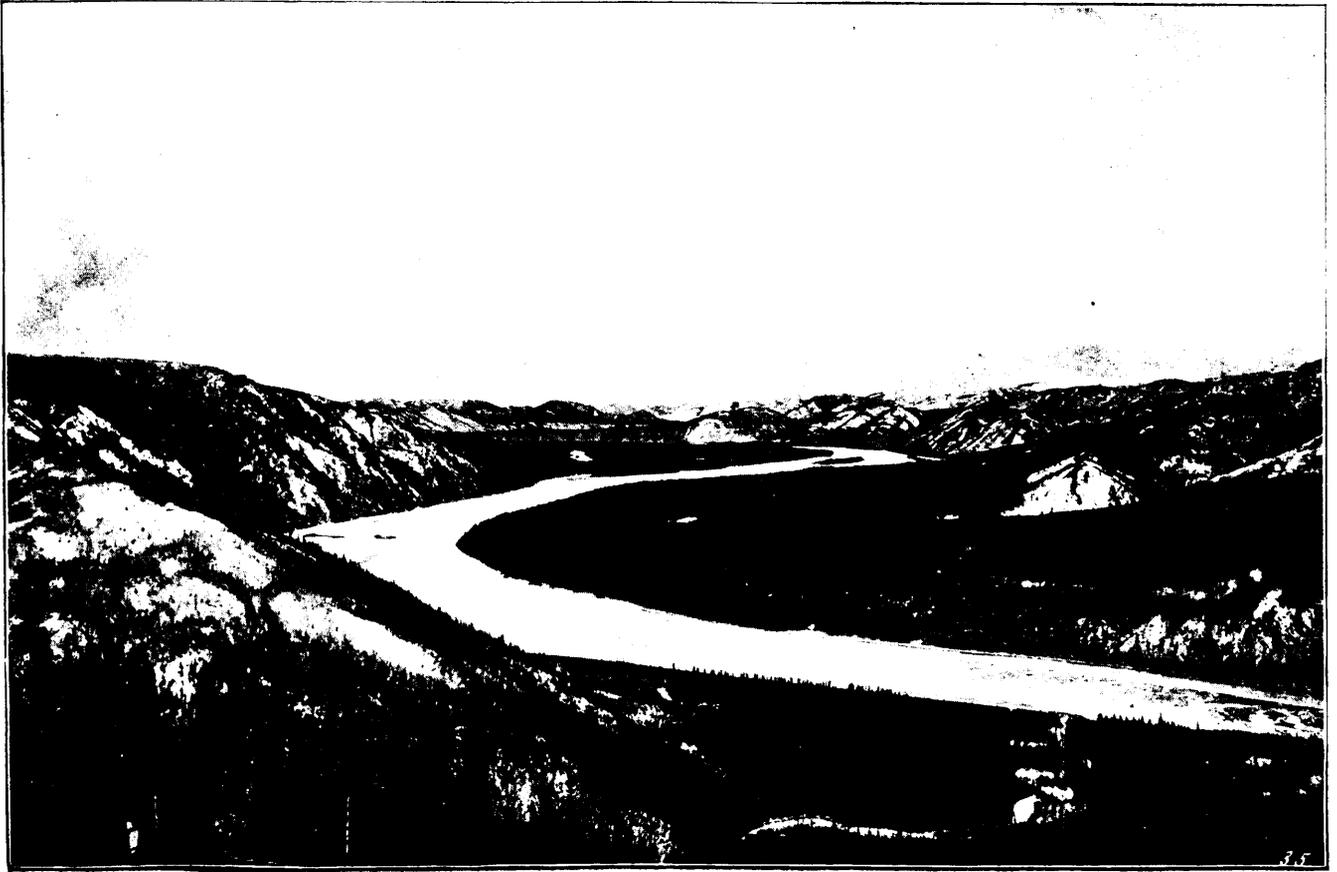
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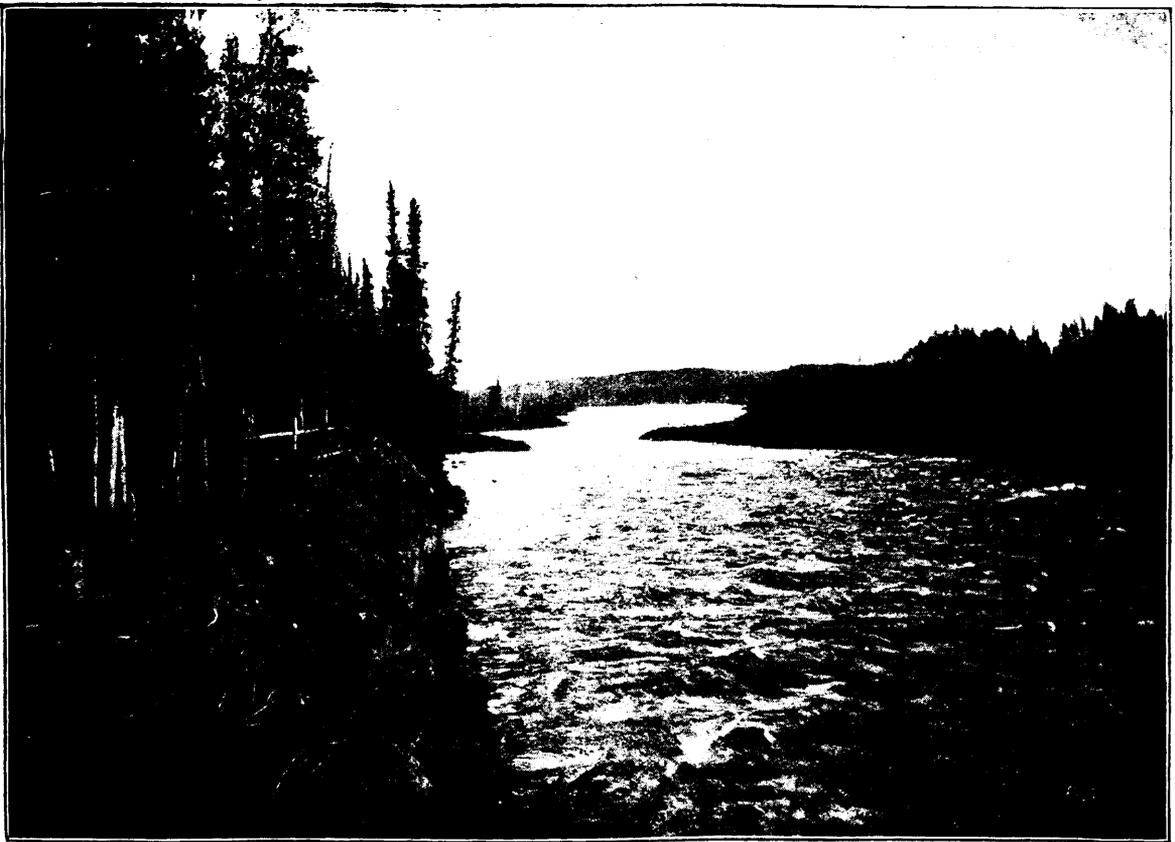
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MILES CANYON.

KLONDYKE AND COAST.

The Mining Record.

Vol. IV.

JANUARY, 1898.

No. 1

BRITISH COLUMBIA MINING RECORD.

Devoted to the Mining Interests of British Columbia.

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THE EDITOR, B.C. MINING RECORD,
P.O. Drawer 57, Victoria, B.C.

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 57, Victoria, B.C.

IN the spring of 1898 it is estimated that at least 200,000 people will be going from all parts of the world to the golden, frozen Klondyke, the land of dreams, of hardship and of mystery, and as these 200,000 people will want to know the easiest and best way of getting there, the MINING RECORD has undertaken to tell them all about it—how to get there, what the life is like when they do get there, what supplies they should take with them, and where to get them. In a word, this special edition of the MINING RECORD aims to be and indeed is a complete guide to the Klondyke—an adaptation of an Indian word Trondik, meaning fish river—so far as it is possible to compile a complete guide to a corner of the world that is still largely unexplored. Popular nomenclature has dubbed the gold-bearing region of the north "the Klondyke," but the Klondyke proper is a very small portion of the vast area of gold producing country in the Canadian Yukon, and many of the adventurous souls who go north in the spring will find themselves going over country on which the foot of man has never trod before they return to civilization. Just how much gold there is there or what the extent of the gold-bearing tracts is, is at this writing absolutely unknown, but it is estimated that there is enough to make many millions of people rich and still leave room for more. In fact the best estimates obtainable from the representative men and Dominion Government officials who have been on the spot is that

the Yukon country has the largest and richest gold-producing area that has ever been discovered in the history of the world.

THE KLONDYKE GOLD FIELDS ARE IN CANADA.

All outfits purchased in Canada can be taken in free of duty, but outfits purchased in the States are Dutiable to the extent of from \$150 to \$200 on each outfit.

VICTORIA, B.C., has the goods and is the most convenient place to procure non-Dutiable Supplies.

It is assumed that those who are desirous of going to the Klondyke wish to get there as cheaply and as conveniently as possible, and that being the case they will naturally buy their tickets to Victoria, B.C., where the MINING RECORD is published, and buy their outfits there, for Victoria is nearer the gold fields than any other important point and is in quite as good if not better position to supply intending miners with their outfits than any of the other cities for the reason that it was the base of supplies for the miners in the old Cariboo days, so that its merchants got a thorough insight into the requirements of the mining fraternity and have never forgotten the knowledge thus gained. Every steamer leaving for the northern points makes Victoria a port of call, and when the spring opens there will be several special services, so that intending miners will have not only a practically unlimited choice of routes and steamers but of outfits as well; and by purchasing their outfits in Canada they will save at the very least more than the price of their passage money, for all goods purchased in Seattle, or Tacoma, or San Francisco, or other United States points, are dutiable, the rate of duty being from thirty to thirty-five per cent., which means that on every outfit bought in the United States duty to the amount of from \$150 to \$200 will have to be paid when it is being taken into Canadian territory. As the majority of those who will join in the rush for fortune in the frozen north will be men of not more than moderate means, this important fact cannot be impressed upon the world too strongly.

Arrived at Victoria the miner will find himself but a few days distant from the land of his dreams. From Victoria to any of the points of debarkation is a short and in fair weather a delightful journey which may be made in comfort and safety in any one of the commodious and comfortable boats which the Canadian

Pacific Railway Company and the Canadian Pacific Navigation Company and innumerable other companies will have in commission when the rush sets in in the spring. There need be no fear of lack of accommodation either in Victoria or on the boats. There are any number of hotels here of uniform excellence of character, and as has been said of transportation facilities, will be equal to the demand. For the obtaining of supplies no better point could be selected. Victoria is the leading seaport of Canada in number of vessels and tonnage and its various wholesale and retail establishments are the equal of any on the continent. The city is old and beautiful, and those who intend going to the Klondyke will find it well worth while to come here ahead of time and spend a few weeks in visiting the various points of interest in and around the city and deciding on their outfits.

It is not necessary in this introductory matter to do more than direct general attention to the obvious advantages of Victoria as an outfitting point or to cover the facts regarding the Yukon country described so carefully and capably by Mr. Wm. Ogilvie, F.R.G.S., in the lecture which is reproduced in this issue. What can be told here is the kind of outfit a miner should take and the conditions and governmental regulations that he will find himself face to face with on his arrival at the golden spot.

To begin with the outfit. The following list of supplies has been prepared for the RECORD after consultation with and revision by experienced Klondykers and merchants who are making a specialty of outfitting, and when these goods are bought in Victoria no duty has to be paid upon them:

PROVISIONS, &c.	CLOTHING, &c.	HARDWARE, &c.
Flour,	Makinaw Suits,	Gold Pans,
Bacon,	Overshirts,	Wire Nails,
Beans,	Heavy Tw'd Shirts,	Whip Saw,
Evaporated Fruits,	Wool'n Underwear	Wedges,
Evap. Vegetables,	Woollen Socks,	Hand Saw,
Butter,	Buck & Wool Mitts	3/8-in Manilla Rope
Sugar,	Felt and Fur Caps,	Compass,
Condensed Milk,	Heavy Wool Pants,	Knife and Sheath,
Coffee and Tea,	Navy Guernseys,	Pack Strap,
Pepper, Salt, etc.,	Heavy W'l Blank'ts	Brace,
Baking Powder,	Sleeping Bags,	Pick and Handle,
Oatmeal,	Cotton Tent,	Hand Axe,
Meat Extract,	Glasses,	Hammer,
Soap,	Spectacles,	Buckets,
Matches,	Towels & Sundries,	Cooking Utensils,
Candles,	Arctic Shoes,	Hooks and Lines,
Rice,	Oil Clothing,	Stove,
Tinned Meats,	He'vy Le'h'r Boots	Piece of Sheet Iron,
Prunes.	Rubber Boots.	Medicine Chest,

In addition to the clothing mentioned a desideratum is a fur shirt with hood attached, but as this is a comparatively expensive luxury, only those who are well-to-do can afford it. Nearly all the retail merchants in Victoria have had extensive experience in preparing outfits for Yukon gold seekers. They know the quantities required and supply only the best goods and those at moderate prices.

Now as to the conditions which prevail there, they are best described in a letter written in September last by a very capable newspaper correspondent, Mr. William J. Jones. Mr. Jones says:—

The site of Dawson City was originally located by Joe La Due and Harper, as a townsite. The latter is a trader and owns several stores in the Northwest. They were the first to get a "tip" of the great strike and lost no time in securing 160 acres of land as a townsite at \$1.25 an acre. Lots 50x100 feet are now

selling for amounts varying from \$8,000 to \$14,000, and an ordinary building lot on the edge of town at the base of the mountain is sold for \$250 and upwards. Last year logs sold for \$1.40 apiece and now they command \$3.00 and \$4.00. Most of the buildings are constructed of logs hewn on three sides and solidly chinked with heavy moss. The roofs are made of poles, on which a layer of moss fully ten inches thick is laid and a layer of dirt about twelve inches deep serves to keep out the cold. Heavy embankments of earth piled up against the huts on the outside serve as additional protection against the chilling blasts of the Arctic winter gales.

About eighty log cabins and some 500 or 600 tents constitute the improvements of Dawson City. The two commercial companies have built fine, large two-story stores and warehouses. The improvements made by the Alaska Commercial Company must have cost nearly \$100,000 and those of the North American Trading and Transportation Company were not much less expensive. To build the commonest kind of log cabin 18x24 feet costs from \$3,000 to \$6,000 and the buildings erected by the former company cover an entire block and are of the most substantial character that money and labour can build.

Front Street is the principal thoroughfare. The street is full of hewn timber and chips, and carpenters are working from early dawn till late at night erecting cabins to accommodate the demands of the trade. Mechanics are paid an ounce for nine hours' work and many of them are earning from \$20 to \$25 a day. The streets are full of tents, but the Canadian officials are compelling builders to erect cabins on the lines of their property, and in a short time Dawson City will bear the resemblance of a well-laid-out frontier town. Aside from the two stores, three or four barber shops, half dozen laundries, five or six restaurants, a second-hand store or two, two saw-mills, three butcher shops, two jewelry stores, a dozen physicians and dentists, a couple of real estate offices, the principal business engaged in is the sale of intoxicants. Meat is sold at 75c. a pound, and at one time during the summer ice sold for \$1.50 a pound. Some enterprising fellows went down the river a short distance and found a glacier, and realized a neat sum in selling ice to the saloons. The laundries charge \$1.25 for washing and ironing a white shirt, and 75c. apiece for flannels. Shaving is 50c. and a haircut is \$1.00. Loaves of bread, and small ones at that, find ready sale at 50c.

WINTER WEATHER.

The weather in the winter averages about 45 degrees below zero, and last winter for two or three days it hung around 59. One or two instances are remembered by some of the pioneers when the instrument registered 84 degrees, and that was cold weather, they say. When it is colder than 40 degrees there is no wind. The river freezes and jams so full of ice in places that it is impossible to drive dog teams, and it frequently becomes necessary to resort to inland travelling.

The expense of freighting supplies to the mines in Eldorado and Bonanza Creeks, a distance of fifteen or twenty miles, is very high, a rate of fifty cents a pound being charged. The trail is marshy and in some places full of boulders and quite steep, rendering travelling very tedious and difficult.

The amount of gold taken out of the Klondyke dis-

tract in the past eleven months is astounding. Whether other gulches with riches equal to those of Eldorado and Bonanza Creeks will be discovered is the problem of the hour. Opinions differ materially, but the majority seem to think that before the approaching winter is over that paystreaks on other claims will be found that will parallel last winter's discoveries. Everybody is at a feverish heat and ready for a grand rush to any new diggings. The slightest word or gesture on the part of some of the men supposed "to be on the inside" would precipitate a panic and almost depopulate the town in a day. It was only a few days ago that somebody whispered around that good prospects had been found in Sulphur Creek, and a big rush to the field took place. Women joined in the scramble, some of them closing their restaurants and laundries. Every piece of land from one end of the creek to the other was staked out and prospect holes are now being sunk, but owing to the marshy condition of the soil definite results cannot be had before the October frosts come around. All along the gulches of Eldorado and Bonanza Creeks are cabins in which are cans of gold exposed and unprotected. More care is exercised in guarding and protecting bacon and flour than the bright yellow gold, fresh from its state of virginity. It is impossible to estimate the amount of gold being taken out every day. Many men are realizing handsome revenues from "working claims on the lay," that is to say, the owners rent out their properties to workmen for one-half of the gold product.

ON ELDORADO CREEK.

Eldorado Creek has about forty exceptionally rich claims employing from twenty to sixty men each. The other claims have not and cannot be developed sufficiently before the middle of next winter to determine their richness. To form an idea of the character of the diggings I will cite facts about claims at random. A fraction of a claim owned by J. L. Elwell and Mr. Leonard realized \$2,500 in the first clean-up last spring. Claim No. 1 was located by C. H. Whipple, after whom the creek was first named, and he sold the claim to Mitchell, Bowker & Co. for \$2,000, and in the first clean-up after the sale \$30,000 was realized. No. 2 was located by Frank Piscater and Fred Price. After the pay dirt was thrown on the dumps the former bought his partner's interests for \$5,000, and the first clean-up netted \$49,000. The total product of this claim far exceeds \$100,000, and not one-half of it has been worked. In two box-lengths on a fraction of claims 3 and 4, \$8,000 was taken out of the dumps. Clarence Berry, of Fresno, Cal., and his associates operate claims 4, 5, and 6, and out of the upper end of 5 and the lower end of 6 over \$130,000 was taken out of the earth. In ground sluicing this summer over \$50,000 additional was taken from the boxes. Fred Hutchinson and two others out of claim 7, from a small dump of four or five box lengths, cleaned up \$31,000. On the adjoining claim James McNamee worked on a lay and mined out upwards of \$75,000. N. C. Delmas has taken out from \$75,000 to \$80,000 on claim 9. The next claim turned out \$15,000 to John Ericson, and he is now on his way to Sweden. Fred Bruseth and Thomas Blake have done no drifting on No. 11, but in ground sluicing in the last two weeks have cleaned up \$20,000. Louis Langlo and Mr. Ellis sunk a prospect hole and took out \$1,500. Prof. Lippy, of Seattle,

owns claim No. 16, and during the six or eight months that he developed the property between \$80,000 and \$90,000 was realized. N. Picotte and J. Hall have taken out \$50,000 or \$60,000 from the adjoining claim. No. 27 is owned by Alex. McDonald and others, and from two small dumps \$28,000 in bright yellow gold was taken. On claim No. 30 last spring four men in sixty days, all working on a lay, took out four box lengths and washed out \$80,000, and this spring in ground sluicing each man netted himself about \$12,000 additional. Tim Bell last winter bought claim No. 31 for \$100, and four months later sold it to Billy Lock for \$30,000. Mr. Anderson, who was formerly an employee in the North American Transportation and Trading Company's stores at Forty-Mile Creek, owns No. 32, and in two bucketfuls of gravel from bed-rock took out \$1,000 in nuggets. In No. 36 and 37 A. Olsen, A. Celene and M. Knutson, all of Tacoma, this summer ground sluiced nearly \$20,000, and found the largest nugget ever taken out of the Yukon River basin. It was worth \$583.23.

ON BONANZA CREEK.

Bonanza Creek is the next best paying creek in the district, and averages from about \$1,000 to \$5,000 to the box length, and on which are about 150 claims operated on a large basis and employing from six to fifty men each. The original discoverer was George Cormack. Bert Hutchinson, formerly of New York, and who has mined on Miller Creek for the last two or three years, owns No. 5, and from last winter's dump took out \$20,000. No. 10 was worked in a similar manner by Harry McCullach and Mr. Gailbrath, and out of several good-sized dumps realized \$30,000. From No. 17 F. W. Cobb, of Massachusetts, and formerly a member of the Harvard football team, and Pete Okswig, an old miner from Miller Creek, in one clean-up netted \$5,000 each. L. B. Rose owns No. 21, and has earned a like sum. H. L. Smith worked No. 24 on a lay, and from the first large dump took out \$20,000. George Moran, an old Alaska miner, had a lay on No. 25 and produced \$80,000. Ben Wold owned No. 26, and from the first small dump took out \$10,000 or \$12,000 and then sold the claim to Frank Densmore, an old-timer, for \$50,000. The latter and his partners in one clean-up realized \$25,000, which was the result of twenty-four hour's work, and in the last two weeks they have taken out \$75,000. No. 27 is owned by Alex. McDonald, an old Colorado operator, and Jim Doherty, of Olympia, and they are taking out large quantities of gold. Two years ago McDonald came to the Yukon flat broke and without a grubstake, and to-day he owns an interest in thirty-one claims and is conservatively reported to be worth in round figures \$1,250,000. Thomas Pelky, a Frenchman, owns No. 40, and last spring and summer took out \$30,000. All of these claims are situated in what is called Upper Bonanza. On Lower Bonanza I took note at random of the following claims:

On the discoverer's claim some \$4,000 or \$5,000 was taken out this season. No. 4 has been prospected but little, but in one box length 12x12, \$1,700 was taken out. Nos. 7 and 8 show up well, and the latter claim in three box lengths yielded \$6,000. No. 8 A, owned by C. K. Zilly, of Seattle, in two box lengths produced \$4,000. No. 10 was bought from Louis Paene by Zilly and Robert Crook, and the first few days' work turned out \$3,500. John Horne, out of

No. 14 in a small dump realized \$4,000 to \$5,000. No. 53 is owned by Dr. Willis, of the Mounted Police, and a Mr. Swanson, and has been ground sluiced to some extent and very big results obtained. No. 60 was bought by J. O. Hestwood early in the summer for \$1,000, and recently he sold one-half interest for \$10,000, besides realizing several thousands of dollars from various clean-ups.

HUNKER A PROMISING CREEK.

Hunker is a promising creek. In a few weeks or as soon as the ground freezes to a depth of fifteen or twenty feet drifting will commence and the richness of the district will have been determined to some extent. The manner of drifting or working a claim in the winter season is to sink a hole about eight feet wide to bed-rock, and then workmen go below and tunnel out in various directions after the ground has been thoroughly thawed by large fires in the drift holes. A man stands at the windlass above and hauls up the earth and gravel and throws it on the dumps. In the spring and summer sluice boxes are built and the dumps washed. It might be well to remark that the riffles in the boxes are far from being so constructed to save gold less than the size of a pin-head, and consequently there is much metal lost and in years to come, as is now instanced in California, Montana, Idaho and other mines, companies with improved machinery and facilities for saving fine gold will re-operate these Klondyke diggings and realize millions of dollars.

Gold Bottom and Last Chance Creeks are tributaries to Hunker and are showing fine prospects, running from twenty five cents to an ounce to the pan. Bear Creek empties into the Klondyke between Hunker and Bonanza Creeks and the pans full of gravel taken out of the prospect holes from off the bed-rock show some very fine specimens of small nuggets and gold half the size of peas.

The district to the south of the Klondyke called Indian River District promises to be very rich, and hundreds of claims have been staked out. Stampedes have rushed off to Dominion, Sulphur and Quartz Creeks and staked out every foot of available ground to the number of 300 or 400 claims. Prospects in places are extremely good. On all the territory in the creeks I have mentioned there is not a claim that can be staked out to-day.

There are many miners of experience in this locality who believe that some fine placer mines will be discovered on the Stewart River, some 100 or 150 miles above its confluence with the Yukon. Scores of prospectors are up there now.

A word now as to the Dominion regulations regarding placer mining which are in force in the Yukon. The important points of these regulations are reproduced below, but it is only fair to say in regard to Clause 6 that before the spring the Government is likely to abandon the idea of reserving alternate claims and instead reserve blocks of territory in various parts of the country to be disposed of afterwards as seems best. The regulations follow:—

NATURE AND SIZE OF CLAIMS.

1. "Bar diggings," a strip of land 100 feet wide at high water mark, and thence extending into the river to its lowest water level.

2. The sides of a claim for bar digging shall be two parallel lines run as nearly as possible at right angles to the stream and shall be marked by four legal posts,

one at each end of the claim at or about high water mark, also one at each end of the claim at or about the edge of the water. One of the posts at high water mark shall be legally marked with the name of the miner and the date upon which the claim was staked.

3. Dry diggings shall be 100 feet square and shall have placed at each of its four corners a legal post, upon one of which shall be legally marked the name of the miner and the date upon which the claim was staked.

4. Creek and river claims shall be 100 feet long measured in the direction of the general course of the stream, and shall extend in width from base to base of the hill or bench on each side, but when the hills or benches are less than 100 feet apart, the claim may be 100 feet in depth. The sides of the claim shall be two parallel lines run as nearly as possible at right angles to the stream. The sides shall be marked with legal posts at or about the edge of the water and at the rear boundaries of the claim. One of the legal posts at the stream shall be marked with the name of the miner and the date upon which the claim was staked.

5. A bench claim shall be 100 feet square, and shall have placed at each of its four corners a legal post, upon which shall be legally marked the name of the miner and the date upon which the claim was staked.

6. Entry shall only be granted for alternate claims, the other alternate claims being reserved for the Crown to be disposed of at public auction, or in such manner as may be decided by the Minister of the Interior.

The penalty for trespassing upon a claim reserved for the Crown shall be immediate cancellation by the Gold Commissioner of any entry or entries which the person trespassing may have obtained, whether by original entry or purchase, for a mining claim, and the refusal by the Gold Commissioner of the acceptance of any application which the person trespassing may at any time make for a claim. In addition to such penalty, the Mounted Police, upon a requisition from the Gold Commissioner to that effect, shall take the necessary steps to eject the trespasser.

7. In defining the size of claims they shall be measured horizontally irrespective of inequalities on the surface of the ground.

8. If any person or persons shall discover a new mine and such discovery shall be established to the satisfaction of the Gold Commissioner a creek and river claim 200 feet in length may be granted.

A new stratum of auriferous earth or gravel situated in a locality where the claims are abandoned shall for this purpose be deemed a new mine, although the same locality shall have been previously worked at a different level.

9. The forms of application for a grant for placer mining and the grant of the same shall be those contained in forms "H" and "I" in the schedule hereto.

10. A claim shall be recorded with the Gold Commissioner in whose district it is situated within three days after the location thereof if it is located within ten miles of the Commissioner's office. One extra day shall be allowed for making such record for every additional ten miles or fraction thereof.

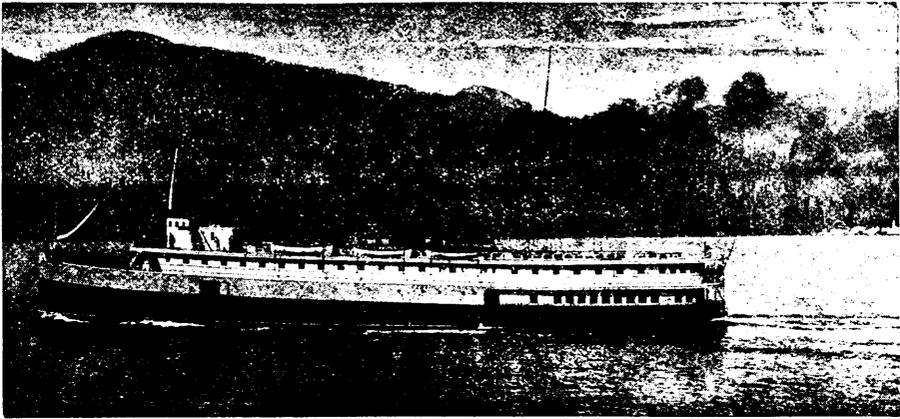
11. In the event of the absence of the Gold Commissioner from his office entry for a claim may be granted by any person whom he may appoint to perform his duties in his absence.



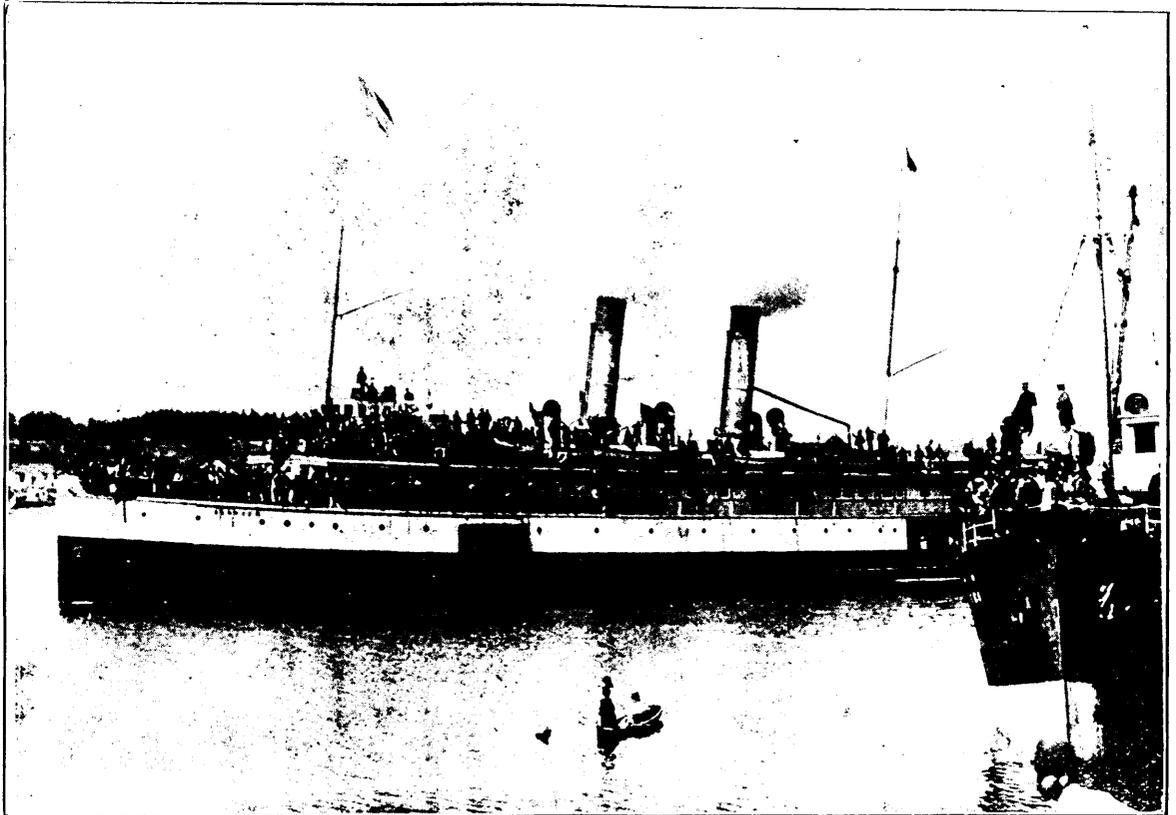
FORTY MILE TOWN



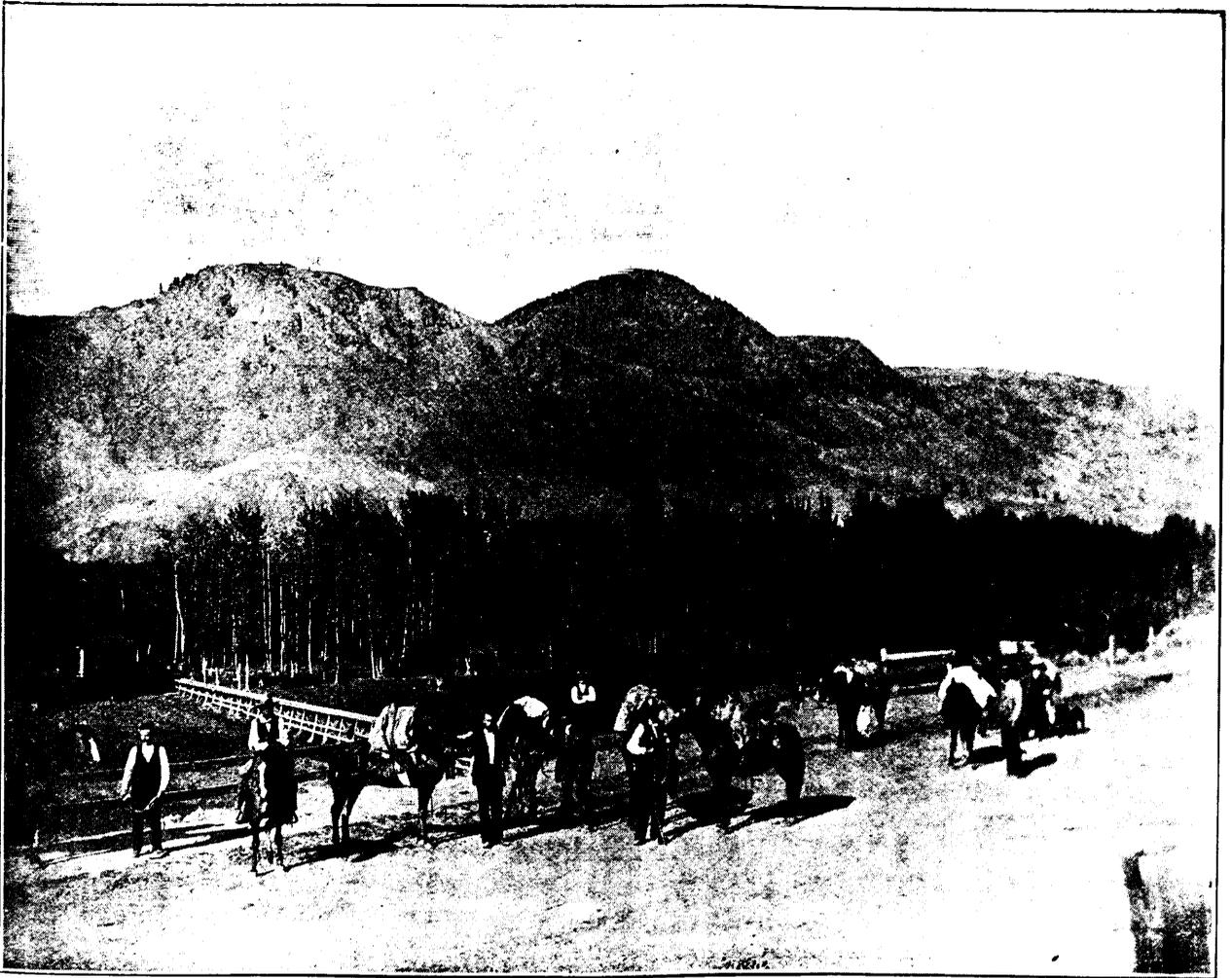
LOOKING DOWN THE CANYON ON FORTY MILE TOWN



STEAMER "ISLANDER" GOING NORTH.



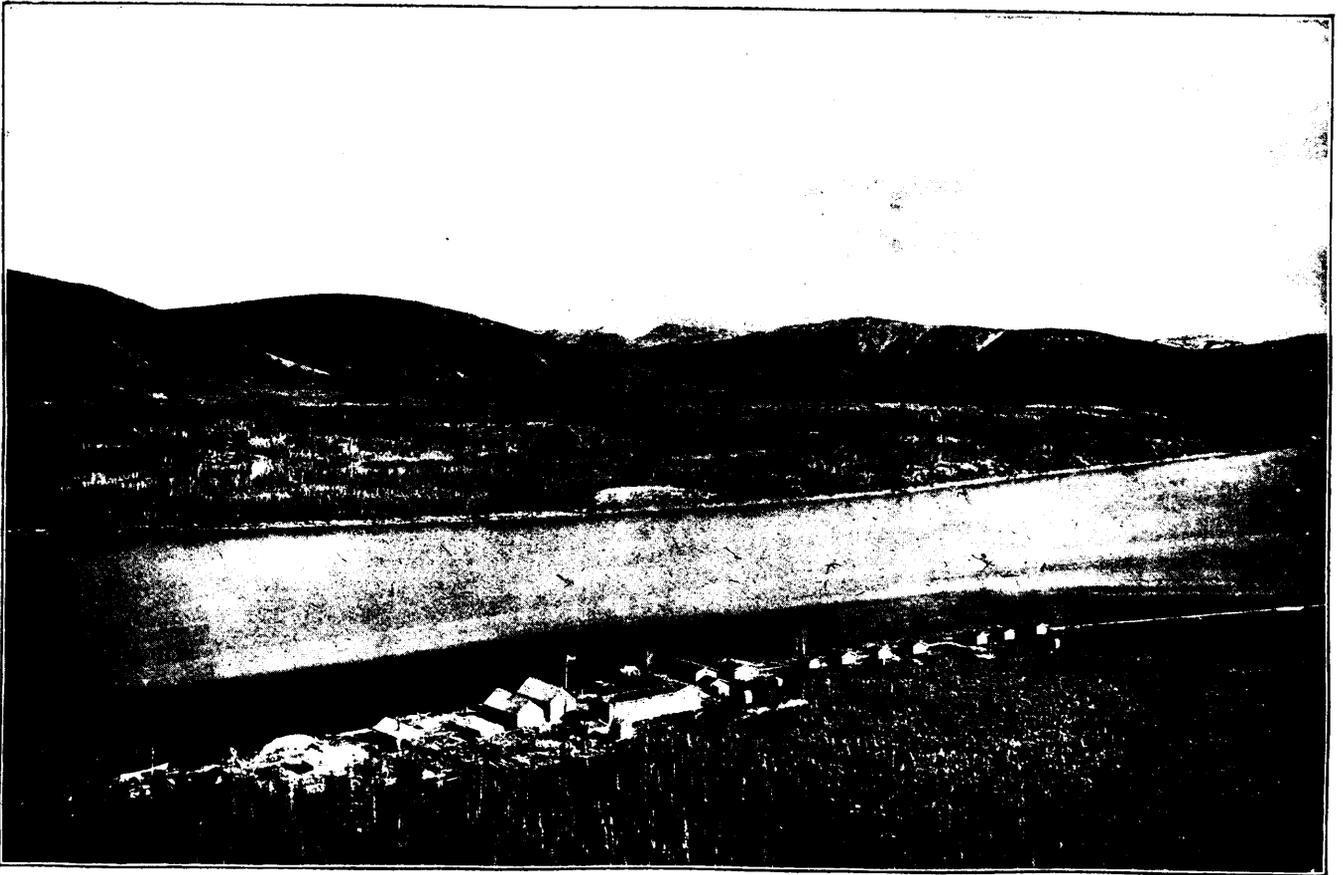
STEAMER "ISLANDER" LEAVING VICTORIA FOR KLONDYKE.



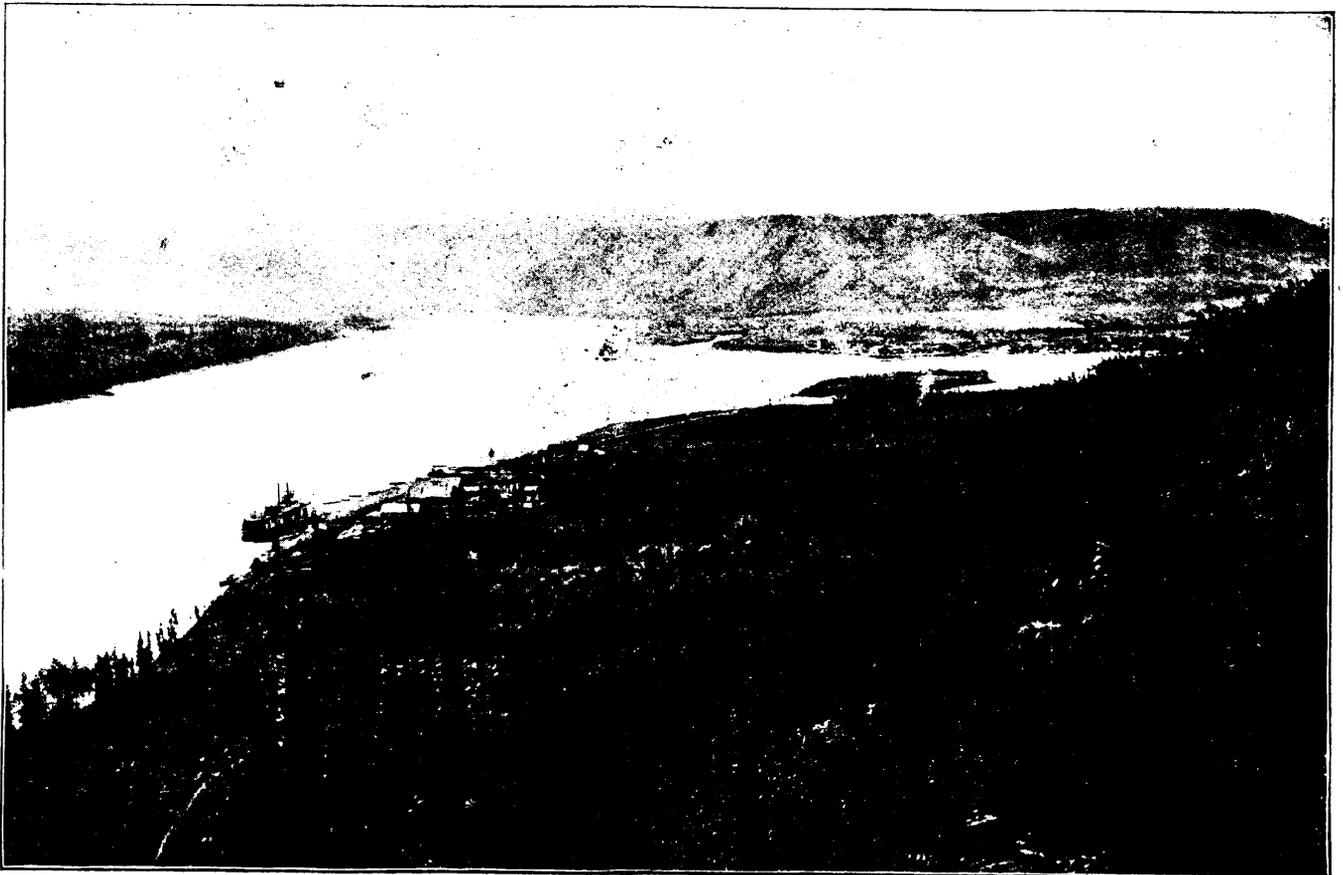
PROSPECTING PARTY STARTING.



PROSPECTING PARTY ON THE MARCH.



JUNCTION OF FORTY MILE AND YUKON RIVERS (LEFT HAND VIEW.)



JUNCTION OF FORTY MILE AND YUKON RIVERS.

12. Entry shall not be granted for a claim which has not been staked by the applicant in person in the manner specified in these regulations. An affidavit that the claim was staked out by the applicant shall be embodied in form "H" of the schedule hereto.

13. An entry fee of \$15.00 shall be charged the first year, and an annual fee of \$100.00 for each of the following years. This provision may apply to locations for which entries have already been granted.

14. A royalty of ten per cent. on the gold mined shall be levied and collected by officers to be appointed for the purpose, provided the amount so mined and taken from a single claim does not exceed five hundred dollars per week. In case the amount mined and taken from any single claim exceeds five hundred dollars per week, there shall be levied and collected a royalty of ten per cent. upon the amount so taken out up to five hundred dollars, and upon the excess, or amount taken from any single claim over five hundred dollars per week, there shall be levied and collected a royalty of twenty per cent., such royalty to form part of the Consolidated Revenue, and to be accounted for by the officers who collect the same in due course. The time and manner in which such royalty shall be collected, and the persons who shall collect the same, shall be provided for by regulations to be made by the Gold Commissioner.

Default in payment of such royalty, if continued for ten days after notice has been posted upon the claim in respect of which it is demanded, or in the vicinity of such claim, by the Gold Commissioner or his agent, shall be followed by the cancellation of the claim. Any attempt to defraud the Crown by withholding any part of the revenue thus provided for, by making false statements of the amount taken out, shall be punished by cancellation of the claim in respect of which fraud or false statements have been committed or made. In respect of the facts as to such fraud or false statements or non-payment of royalty, the decision of the Gold Commissioner shall be final.

15. After the recording of a claim the removal of any post by the holder thereof or by any person acting in his behalf for the purpose of changing the boundaries of his claim shall act as a forfeiture of the claim.

16. The entry of every holder of a grant for placer mining must be renewed and his receipt relinquished and replaced every year, the entry fee being paid each time.

17. No miner shall receive a grant of more than one mining claim in the same locality, but the same miner may hold any number of claims by purchase, and any number of miners may unite to work their claims in common upon such terms as they may arrange, provided such agreement be registered with the Gold Commissioner and a fee of five dollars paid for each registration.

18. Any miner or miners may sell, mortgage, or dispose of his or their claims, provided such disposal be registered with, and a fee of two dollars paid to the Gold Commissioner, who shall thereupon give the assignee a certificate in form "J" in the schedule hereto.

19. Every miner shall, during the continuance of his grant, have the exclusive right of entry upon his own claim, for the miner-like working thereof, and the construction of a residence thereon, and shall be entitled exclusively to all the proceeds realized there-

from, upon which, however, the royalty prescribed by clause 14 of these regulations shall be payable; but he shall have no surface rights therein; and the Gold Commissioner may grant to the holder of adjacent claims such right of entry thereon as may be absolutely necessary for the working of their claims, upon such terms as may to him seem reasonable. He may also grant permits to miners to cut timber thereon for their own use, upon payment of the dues prescribed by the regulations in that behalf.

20. Every miner shall be entitled to the use of so much water naturally flowing through or past his claim, and not already lawfully appropriated, as shall, in the opinion of the Gold Commissioner be necessary for the due working thereof; and shall be entitled to drain his own claim free of charge.

21. A claim shall be deemed to be abandoned and open to occupation and entry by any person when the same shall have remained unworked on working days by the grantee thereof or by any person on his behalf for the space of seventy-two hours, unless sickness or other reasonable cause be shown to the satisfaction of the Gold Commissioner or unless the grantee is absent on leave given by the Gold Commissioner, and the Gold Commissioner, upon obtaining evidence satisfactory to himself, that this provision is not being complied with, may cancel the entry given for a claim.

22. If the land upon which a claim has been located is not the property of the Crown it will be necessary for the person who applied for entry to furnish proof that he has acquired from the owner of the land the surface rights before entry can be granted.

23. If the occupier of the lands has not received a patent therefor, the purchase money of the surface rights must be paid to the Crown, and a patent of the surface rights will issue to the party who acquired the mining rights. The money so collected will either be refunded to the occupier of the land, when he is entitled to a patent therefor, or will be credited to him on account of payment for land.

24. When the party obtaining the mining rights to land cannot make an arrangement with the owner or his agent or the occupant thereof for the acquisition of the surface rights, it shall be lawful for him to give notice to the owner or his agent or the occupier to appoint an arbitrator to act with another arbitrator named by him, in order to award the amount of compensation to which the owner or occupant shall be entitled. The notice mentioned in this section shall be according to a form to be obtained upon application from the Gold Commissioner for the district in which the lands in question lie, and shall, when practicable, be personally served on such owner or his agent, if known, or occupant; and after reasonable efforts have been made to effect personal service, without success, then such notice shall be served by leaving it at, or sending by registered letter to, the last place of abode of the owner, agent or occupant. Such notice shall be served upon the owner or agent within a period to be fixed by the Gold Commissioner before the expiration of the time limited in such notice. If the proprietor refuses or declines to appoint an arbitrator, or when, for any other reason, no arbitrator is appointed by the proprietor in the time limited therefor in the notice provided for by this section, the Gold Commissioner for the district in which the lands in question lie, shall,

on being satisfied by affidavit that such notice has come to the knowledge of such owner, agent or occupant, or that such owner, agent or occupant wilfully evades the service of such notice, or cannot be found, and that reasonable efforts have been made to effect such service, and that the notice was left at the last place of abode of such owner, agent or occupant, appoint an arbitrator on his behalf.

25. (a.) All the arbitrators appointed under the authority of these regulations shall be sworn before a Justice of the Peace to the impartial discharge of the duties assigned to them, and they shall forthwith proceed to estimate the reasonable damages which the owner or occupants of such lands, according to their several interests, shall sustain by reason of such prospecting and mining operations.

(b.) In estimating such damages, the arbitrators shall determine the value of the land irrespective of any enhancement thereof from the existence of minerals therein.

(c.) In case such arbitrators cannot agree, they may select a third arbitrator, and when the two arbitrators cannot agree upon a third arbitrator, the Gold Commissioner for the district in which the lands in question lie shall select such third arbitrator.

(d.) The award of any two such arbitrators made in writing shall be final and shall be filed with the Gold Commissioner for the district in which the lands lie.

If any cases arise for which no provision is made in these regulations, the provisions of the regulations governing the disposal of mineral lands other than coal lands approved by His Excellency the Governor-in-Council on the 9th of November, 1880, shall apply.

MR. OGILVIE *RE* THE YUKON GOLD FIELDS.

OUR readers, we imagine, will hardly require us to apologize for devoting much space to the admirable lecture delivered in Victoria on the 6th ult. by Mr. Ogilvie, F. R. G. S., on the subject of the Yukon Gold Fields, a *verbatim* report of which was obtained by a representative of the RECORD. Much that Mr. Ogilvie tells us is new and instructive. All that he said was interesting. The chair was taken by the Hon. James Baker, Minister of Mines, who discharged the duties in a very happy manner. Mr. Ogilvie said:

MR. CHAIRMAN, LADIES AND GENTLEMEN:—After the very flattering introduction given me by the chairman, and your very hearty reception, I feel called upon to make a few preliminary remarks in explanation of my position. I have come totally unprepared except for a few notes I made this morning, having, I may say, had to snatch the time for the purpose from my visitors, who wanted to get information from me—but I have been able to compile a few notes. You know the general explanation which is often used by the good lady of the house when she says that your visit is altogether unexpected and has taken her by surprise, although you know that she has not only been good enough to expect, but has also during the past few days been busy making preparations for your comfort. However, you will see that I am not in that position, but am really in the position in which the good lady of the house professes to be and is not; with this important difference that I cannot “cook” that which I have to serve to you.

If you will kindly allow this to be understood, and pardon any shortcomings, I will do my best to give you all the information I can, and if you do see any fault, please attribute it to this want of preparation. My hands are tied officially, and I am not able to disclose certain things until a certain blue book is published at Ottawa, which I hope will be early next year. I must also say that never but once before have I occupied a similar position to that in which I am placed to-night, and that on that occasion I acted as chairman.

Now, to make a commencement of the subject, we will assume that we want to visit the Yukon country. I may say,

Mr. Chairman, that I object to the use of the name Klondyke, because that is so small a portion of the territory we have up there in the Yukon region, in comparison with which the area of the Klondyke would not compare any more than my hand would with that blackboard, and nearly all of that vast stretch of country has yet to be prospected.

I will first introduce you to the several routes into this great gold-bearing region which are now known. Leaving Victoria by any one of the steamers which run from here, we make our way through the well known Seymour Narrows, taking care to time that passage to reach there at a suitable stage of the water, for it is well known that no ship can go through except at either high or low tide. In a few days, according to the capacity of the steamer, we reach Port Simpson, the most northerly seaport in British Columbia or Canada on the Pacific Ocean. If we wish to make our way in in British bottoms, we can here take the river steamers and proceed from Port Simpson to Wrangel, it being about 170 miles from the former point to the mouth of the Stickeen River; proceeding up that river about 150 miles, or perhaps a little less distance, as will be proved when the surveys are made for the proposed railway facilities. That distance occupies sixty hours or a little more. From the head of the Stickeen the road would follow though an undulating country which presents no obstacles to railway construction, and for the greater part of the distance of 150 miles is pretty well covered with timber. I would mention, however, that the natural food supply available for horses will not be sufficient for any great number. It might be said that enough would be found for say two hundred head, but any great number would soon eat off what there is, and it will be necessary that such arrangements shall be made as will render it possible for the natural supply to be increased by importing sufficient for any number over and above that.

Arrived at the head of Teslin Lake, we produce our whipsaws and commence to get out lumber for our boats. Now, whipsawing has been said to be one of the inventions of Satan, and when two are doing that work it is necessary for success that one shall push and the other shall pull; but when, as is too often the case with the tenderfoot, both either pull or both push, there is likely to be some enquiry from the man who is above what the other fellow is doing, and there may be some complimentary language indulged in, and the man below ask his partner to come down and have it out. And if the same man below gets a grain of sawdust in his eye during the progress of the quarrel, there will be quite a sulphurous atmosphere for some time. After a while though, in spite of these difficulties, the boat will be finally got ready, and then commences the trip down the Teslin Lake, which is eighty miles long and bounded on both sides by high mountains. This distance is of course only as I have been told. We arrive at the head of the Hootalinqua after traversing the lake. This river is marked on the map as being the Teslin, which is the Indian name for a fish which is caught in the lake. The Hootalinqua River is about 125 miles long—or a total distance from Victoria to Dawson City by way of the Stickeen, Teslin and Hootalinqua route, of 1,600 miles. At two points, one near the head of the river and one quite a distance below, there are obstacles in the way of steamboat navigation at certain times of the year, during certain stages of the river. A few miles below the river broadens out into innumerable channels, until at last, at the lower end, it widens to two and a half miles. If one of these channels were deepened out, a sufficient depth of water could be obtained to allow of a free passage for a steamer drawing three or four feet without difficulty.

I leave you now at the mouth of the Teslin, and go back to Wrangel, where we take an American boat to Juneau. There has been during the last few months some talk in regard to a proposed route by way of Taku Inlet. In 1894 and 1895 I was employed to go in that portion of the country. Taku Inlet is something about eighteen miles long, and leads up to a glacier of much greater size and affording considerably more danger to boats than the much talked of Muir glacier in Alaska. The ice is cast off in great avalanches and is continually breaking off. I have visited the Muir glacier and have never seen a breaking take place; whereas in Taku, where I remained for three weeks, I saw large bodies of ice break away every day, which in every case create a surge in the water that is dangerous to boats even to so great a distance as three miles away from the glacier. This Taku River extends for sixty miles. There are enormous gravel bars which render it impossible for steamboats to navigate it, although it is said they might during the months of June or July—or during the warm weather. From the forks we go up by the left-hand branch about nine miles over to Tagish Lake. Along this route we meet with no very great difficulties, and keep up about nine miles, going past the Silver Salmon Creek. In regard to this route I may

say, however, that I have not examined any considerable portion of it, but civil engineers are now exploring it, and their reports will of course be made public.

From the summit there will be no difficulty in constructing a road to the head of Teslin Lake. We have here then two roads—one of them offering almost perfect advantages, with the additional greater one that it can be called an all-Canadian route if we choose to so name it. We go back again to the coast now, and proceed a hundred miles above up to Skagway, where we find the celebrated White Pass route. From tide water to the summit of the White Pass is a distance of about seventeen miles, four miles being through all timber. Above that the valley breaks, and any road will have to be constructed to lead along the hillside. An elevation of 2,600 feet is reached at the summit of the pass. Once on the summit the remainder of the thirty-five miles is tolerably level, but is extremely rocky, and the land is of very little value.

We now go to the Dyea route, which has been used by the Indians for generations, and it is evident that they knew their business in selecting it. The word Dyea is itself an Indian one, meaning "pack" or "load"—a very appropriate name for the trail. From tide-water to the mouth of the canyon it would be as easy to build a road as can well be imagined, as easy almost as to construct one along one of your city streets. From the mouth of the canyon to Sheep Camp, construction is more difficult; in fact it would probably be necessary to suspend the road by iron girders from the sides of the cliffs. From Sheep Camp to the head of the climb is yet more difficult, as all who have gone over the road will heartily agree. It is very steep, and very, very stony. From the summit to Lake Lindeman there is a decline of 1,320 feet, and the road has been somewhat improved of late. Lake Lindeman itself, the first lake, is about four and a half miles long, and between Lake Lindeman and Lake Le Barge there is a sandy ridge three-quarters of a mile long, which brings us to the end of the present Dyea route.

Lake Bennett, which is first encountered on what is known as the Skagway route, is for the first half of its length narrow and comparatively shallow. The other end of the lake is fully exposed to the strongest winds prevailing in that district, and which frequently get up a very ugly sea, decidedly dangerous for small boats, as I have myself experienced. Cariboo crossing, which is about two and a half miles long, brings us to Tagish Lake, which is about seventeen miles long. Here the Mounted Police and Canadian customs officers have been stationed. The geography of Tagish Lake is already pretty well known, nor need any special attention be given to Marsh Lake.

Twenty-five miles from Marsh Lake we come to the canyon where the river is very swift, and passes between almost perpendicular walls. Running the canyon is easily practicable provided the boat be kept in the very centre of the stream. Do this and the boat rides through safely. If not she will be dashed against the side walls of basaltic rock and pounded to pieces. In the middle of the canyon, which is about five-eighths of a mile long, is the basin—a circular pool from which it would be impossible for a man to climb out of. At the foot of the canyon is a very large rapid through which the boat goes so fast that she dips into them, taking in water unless the greatest care is taken. Should she get into the eddy, man and boat will be thrown on the bank whether they will or no. Below the canyon there is another rapid, which, however, offers no special obstacle to a man wanting to go through. I've been through.

Below that is what is known as the White Horse rapid. Now you can run the White Horse rapid if you want to—at least you can try to. I don't. I traced up thirteen men who had lost their lives in running this rapid in a single season, and though I cannot say so for certain, I believe that this must have been a large proportion of those who made the attempt. Of course for those who want to do the daring deed and talk about it afterwards, there is the White Horse rapid to be run. I don't do it, however. Below, at the Five Fingers, the river is partially dammed by a conglomerate rock standing like a pillar in the stream. Avoiding it, let the boat go easy and all will be well. But see that the boat doesn't dip or she will take much more water than you require. Below this there is another rapid, and then the smooth and unhampered river, from which on everything is all right.

Of the Dalton trail I know nothing by personal observation—only by report. I had an interview with Mr. Dalton, from whom the trail is named, in 1896, and I have also talked with Mr. McArthur, our surveyor, who has spent some time in that district recently. Of course the substance of his report cannot be divulged at present.

The summit of this trail is about forty-five miles from the coast, and 3,000 feet above the sea, the watershed is about

seventy-five miles from the coast, and Dalton's trading post 100 miles from the coast. Thence to the Pelly is 200 miles farther. This route passes over a nice undulating plain, well timbered in the valleys and with grass on the slopes, but not enough to feed any number of animals. The first thirty-four miles of the Dalton trail is in disputed territory, the rest of it in Canada, just as is the case with the Dyea and Skagway trails. Now, for my part, I think it is our duty as Canadians to sink all political differences—to let the fire of patriotism consume all feelings that would tend to retard the acquisition of this most desirable line as an all-Canadian route to the Yukon (applause), so that we may enjoy as far as possible the benefits that region will bring if we use our rights wisely and well. We have the best end of the Yukon River—that is certain. In going down the Yukon in a steamer recently from Dawson City, the first 140 miles was made without any difficulty, and until we got below Circle City there was no trouble. But below that the steamer began to labour, the water got shallower, and the steamers have often been detained on sandbars for weeks. It is a common occurrence to be delayed hours and even days on bars, and in on what is known as the Yukon Flats, just below Circle City. Not once is there difficulty of this kind found in our part of the river, but in the Alaska portion it is an every day occurrence for a steamer to stick. I know of one steamer that stuck for three weeks, another that was on a sandbar for four or five days till another steamer came along and bunted her off, and then she stuck on the same bar herself—and I don't know how long she stayed there. (Laughter.)

The navigation of the Yukon River in the upper part is open from May till the middle of October; while at the mouth it is not open before the 1st of July, and navigation does not last longer than the 1st of October—that is, only from two and a half to three months—and it takes river steamers fourteen, fifteen and sixteen days to get up the river to Dawson. St. Michael's, the headquarters of the river boats, is eighty miles from the mouth of the river, and only in calm weather can the steamers cross that bit of open sea. Of course this route by way of St. Michael's, with its river difficulties, is not our road. We have a right to navigate the Yukon, but as I said before, it is not our route.

Now I will tell you the vessels that are engaged at present navigating the Yukon. The Alaska Commercial Company have two large steamers, the Alice and the Bella, besides smaller ones named Margaret and Victoria, the last being named after Queen Victoria, as it was built in the Diamond Jubilee year and launched about the time of the Jubilee. There were also two other small steamers belonging to the company, running at the mouth of the river. The North American Transportation and Trading Company have three steamers, and contemplate putting on two more next summer.

Next let me tell you something about the history of the discovery of gold in the Yukon. Early in the '70s an attempt was made to get over to Teslin Lake by Cassiar miners, who learned of the existence of a large lake northward from Cassiar. Several people tried, but unsuccessfully, and returned disgusted. In 1872, September 2nd, two north of Ireland men, from county Antrim, named Harper and F. W. Hart; Geo. W. Finch who came from the vicinity of Kingston; Andrew Kanselar, a German, and Sam Wilkinson, an Englishman, left Manson Creek to go on a prospecting trip down the Mackenzie River. Harper, because there had been found gold on the Liard, which empties into the Mackenzie, was under the impression that there was gold on the Mackenzie. He made his way down to what is known as Half-Way River. There he met a party of men surveying for the C. P. railway, and unwittingly helped to drive a spike in one great highway, because they gave their boat to the survey men to make their way up the Peace River. Harper and the others packed their provisions up the Half-Way River, and over a two or three mile portage to the waters of the Nelson River, down which they went until they found it safe for the passage of canoes, where they made a cache and proceeded to make three dug-out canoes with which to descend the Nelson.

In 1891 I was sent by the Dominion Government to examine the northeast portion of the province, and going in the trail followed by Harper, I saw the cache which Harper had told me about in 1887. Well, Harper's party made their way down to the Liard River, where they met two men named McQuesten and Mayo. Wilkinson determined to try his luck on the Liard, and left the others. Harper, Hart, the German and Finch went down the Mackenzie, across to the Peel, and thence over to Bell's River, and an affluent of the Porcupine, down the Porcupine to Fort Yukon. There Harper saw an Indian who had some native copper which he said came from White River, and Harper determined to try for it. Harper,

Hart and Finch went 400 miles to White River in September, but did not find the copper. Instead they found some gold as the results of the search. They found no gold on the Mackenzie. The result of Harper's prospecting he gave to me as follows: On the Nelson, nothing; on the Liard, colours; on the Mackenzie, nothing; on the Peel, fair prospects; on the Bell, nothing; on the Porcupine, colours; and prospects everywhere on the Yukon.

Provisions giving out, they had to make their way down the river to St. Michael's. On his way back Harper saw an Indian with some gold he said came from the Kovukuk.

Inquiry elicited from the Indian the place where he found the gold, and Harper prospected there all winter, but found nothing. It is now known where the Indian got the gold, which was not at the place he indicated. During the summer McQuesten made his way up the Yukon, and built Fort Reliance, about six and a half miles below the mouth of the now famous Klondyke. In the following summer Harper joined him there, and they traded in partnership at that point for many years. The valley of the Klondyke was their favourite hunting ground, but they never prospected there, and if they had, in the Klondyke itself, they would have found nothing, for it is a swift mountain stream, which has washed away all the finer sand and gravel; consequently the gold would sink out of sight, and in those days no prospecting was done but on the bars in the rivers and creeks.

In 1882 gold was found on the Stewart River by two brothers, by name Boswell, from the vicinity of Peterboro. At this time there were only about thirty or forty miners in the district. A number of Cassiar miners had discovered the river from Lake Le Barge, and had done considerable prospecting, finding fine gold. On the Stewart the bars yielded fine gold in small quantity. In 1886 Mr. Harper established a trading-post, and in the same year some prospectors found coarse gold at Forty-Mile.

This took all the miners up to the Forty-Mile, coarse gold being what every miner is looking for, and the excitement there continued to draw them until 1891, when gold was found on Birch Creek—200 miles below Forty-Mile. This discovery was due to a Canadian missionary, Archdeacon Macdonald of Fort Peel, travelling through the country from Tenana River, where he found a nugget. He reported the find to some prospectors whom he met, and gave them a description of the place where he had made the find. A search was made, but although the men could not from his description locate the spot—they found gold.

This, of course, boomed Birch Creek, and in 1891 everyone at Forty-Mile went down there. One or two creeks are rich, but the best of them cannot begin to compare with the El Dorado or the Bonanza, the tributaries of the Klondyke. As an incident I may mention that one experienced man told me that the Birch Creek diggings are "only Chinese diggings" compared with the later discoveries which have attracted such attention to El Dorado and Bonanza. He said that he knew of one claim on El Dorado which he would not give for the whole of the Birch Creek district.

Gold was found on the head of Forty-Mile. Napoleon Gulch, named after the Frenchman who located it, is rich in nuggets. Franklin Gulch is pretty rich, as are also Davis, Mosquito and Chicken Creeks. The last named, discovered in 1896, was considered very rich at the time, this being a few weeks before the discovery of the gold in El Dorado and Bonanza. By the United States law a man is allowed to take up a claim 1,320 feet in length, and before anyone could get there the few who discovered it took it all up, so that everyone else was shut out.

For some time there was a doubt as to whether some of the creeks upon which gold had been found were in Alaskan territory, and in 1886 I was sent in by the authorities to mark the boundary line as I might find it necessary. Miller and Glacier Creeks join Sixty-Mile, which runs into the Yukon forty miles above. It was called Sixty-Mile because it was believed to be that distance above Fort Reliance. In my survey of the line I found that these two creeks, which are the richest, are in Canada. So far are they in Canadian territory that no doubt as to the location of the boundary line can affect the question, they being at least two miles east of it. So that we can claim these two creeks which are very rich, without any doubt, and in addition we can claim a much larger region which I will describe.

The discovery of the gold on the Klondyke, as it is called, although the proper name of the creek is an Indian one, Thronda, was made by three men, Robert Henderson, Frank Swanson and another one named Munson, who in July, 1896, were prospecting on Indian Creek. They proceeded up the creek without finding sufficient to satisfy them until they reached Dominion Creek, and after prospecting there they

crossed over the divide and found Gold Bottom, got good prospects and went to work.

Provisions running short, they decided to make their way to Sixty Mile to obtain a fresh supply, and went up Indian Creek to the Yukon to Sixty Mile, where Harper had established a trading post. Striking upwards on Forty Mile they came across a man, a Californian, who was fishing in company with two Indians. The Indians were Canadian Indians, or King George men, as they proudly called themselves. Now, one of the articles of the miner's code of procedure is that when he makes a discovery he shall lose no time in proclaiming it, and the man felt bound to make the prospectors acquainted with the information that there was rich pay to be got in Gold Bottom. The two Indians showed a route to this creek, and from there they crossed over the high ridge to Bonanza.

From there to Eldorado is three miles, and they climbed up over the ridge between it and Bonanza, and reaching between Klondyke and Indian Creeks, they went down into Gold Bottom. Here they did half a day's prospecting and came back, striking into Bonanza about ten miles beyond, where they took out from a little nook a pan which encouraged them to try further. In a few moments more they had taken out \$12.75. A discovery claim was located, and also one above and one below for the two Indians.

In August, 1896, the leader, generally known as Siwash George because he lived with the Indians, went down to Forty Mile to get provisions. He met several miners on his way and told them of his find, showing the \$12.75 which he had put in an old Winchester cartridge. They would not believe him, his reputation for truth being somewhat below par. The miners said that he was the greatest liar this side of—a great many places.

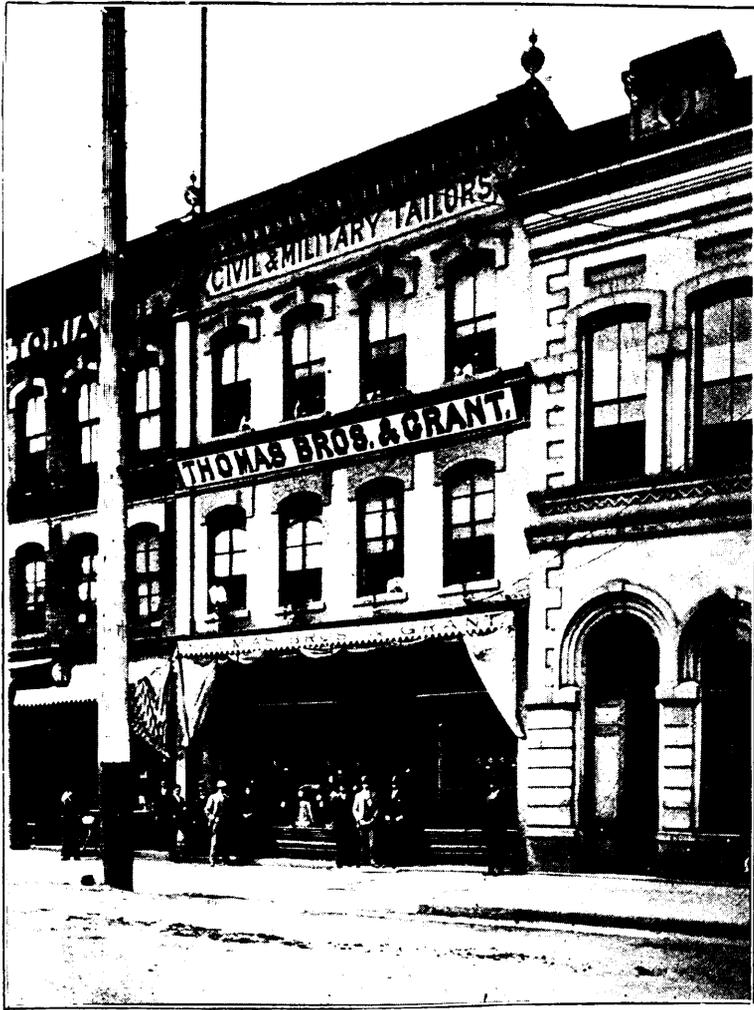
They came to me finally and asked me my opinion, and I pointed out to them that there was no question about his having the \$12.75 in gold. The only question was, therefore, where he had got it. He had not been up Miller or Glacier Creek, nor Forty Mile. Then followed the excitement. Boatload after boatload of men went up at once. Men who had been drunk for weeks and weeks, in fact, were tumbled into the boats and taken up without being conscious that they were travelling.

One man who went up was so drunk that he did not wake up to realization that he was being taken by boat until a third of the journey had been accomplished, and he owns one of the very best claims on the Klondyke to-day. (Laughter.) The whole creek, a distance of about twenty miles, giving in the neighbourhood of two hundred claims, was staked in a few weeks. El Dorado Creek, seven and a half or eight miles long, providing eighty claims, was staked in about the same length of time.

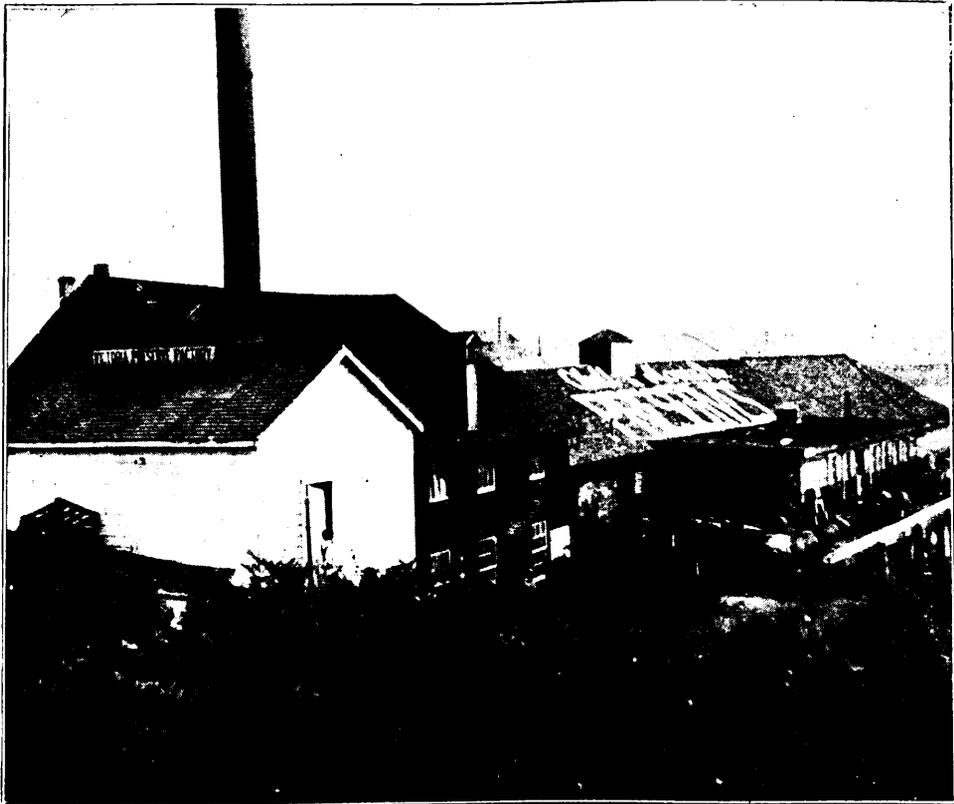
Boulder, Adams and other gulches were prospected and gave good surface showings, gold being found in the gravel in the creeks. Good surface prospects may be taken as an indication of the existence of very fair bedrock. It was in December that the character of the diggings was established. Twenty-one above discovery on Bonanza was the one which first proved the value of the district. The owner of this claim was in the habit of cleaning up a couple of tubfuls every night, and paying his workmen at the rate of a dollar and a half an hour. Claim No. 5, El Dorado, was the next notable one, and here the pan of \$112 was taken out. That was great. There was then a pan of even greater amount on No. 6, and they continued to run up every day, and you who are down here know better of the excitement there was than I, who was in and didn't see it.

The news went down to Circle City, which emptied itself at once and came up to Dawson. The miners came up any way they could, at all hours of the day and night, with provisions and without supplies. On their arrival they found that the whole creeks had been staked months before. A good many Canadians who were in their talk out and out Americans came up to Canadian territory with a certain expectation of realizing something out of this rich ground by reason of their nationality. One of them particularly, on finding that he was too late, cursed his luck and said that it was awfully strange that a man could not get a footing in his own country.

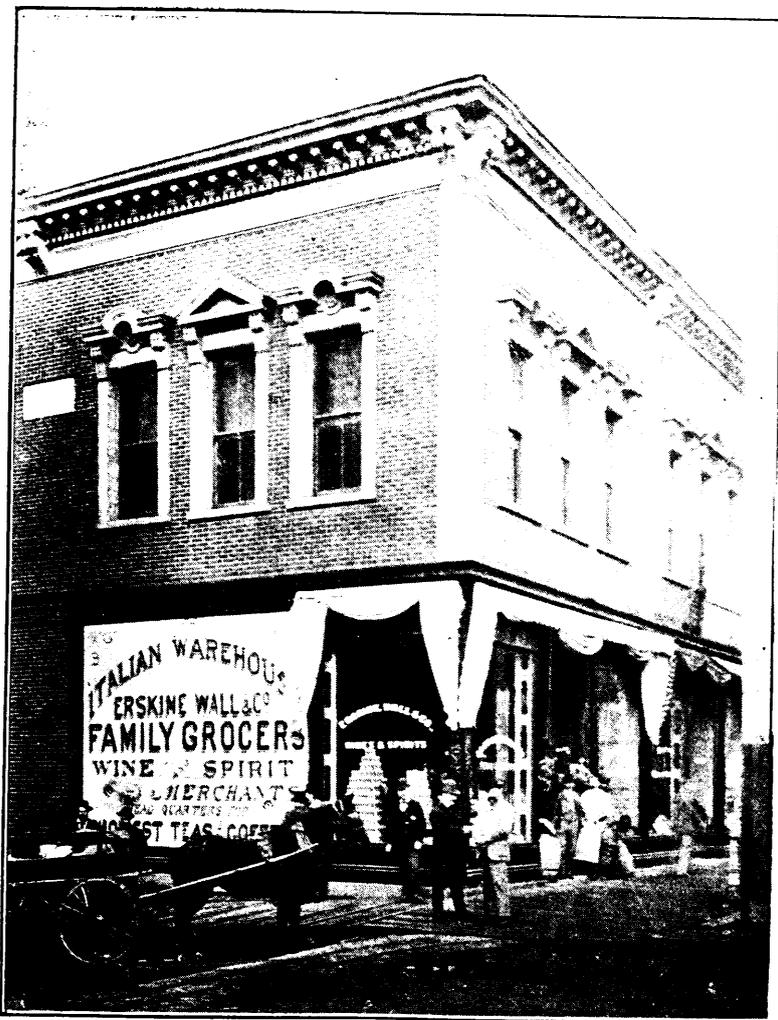
Another of these men who arrived too late was an Irishman, and when he found he could not get a claim he went up and down the creek trying to bully the owners into selling, boasting that he had a pull at Ottawa, and threatening to have the claims cut down from 500 to 250 feet. He came along one day and offered to wager \$2,000 that before August 1st they would be reduced to 250 feet. One of the men to whom he had made this offer came and asked me about it. I said to him, "Do you gamble?" His reply was, "A little." Then I told him



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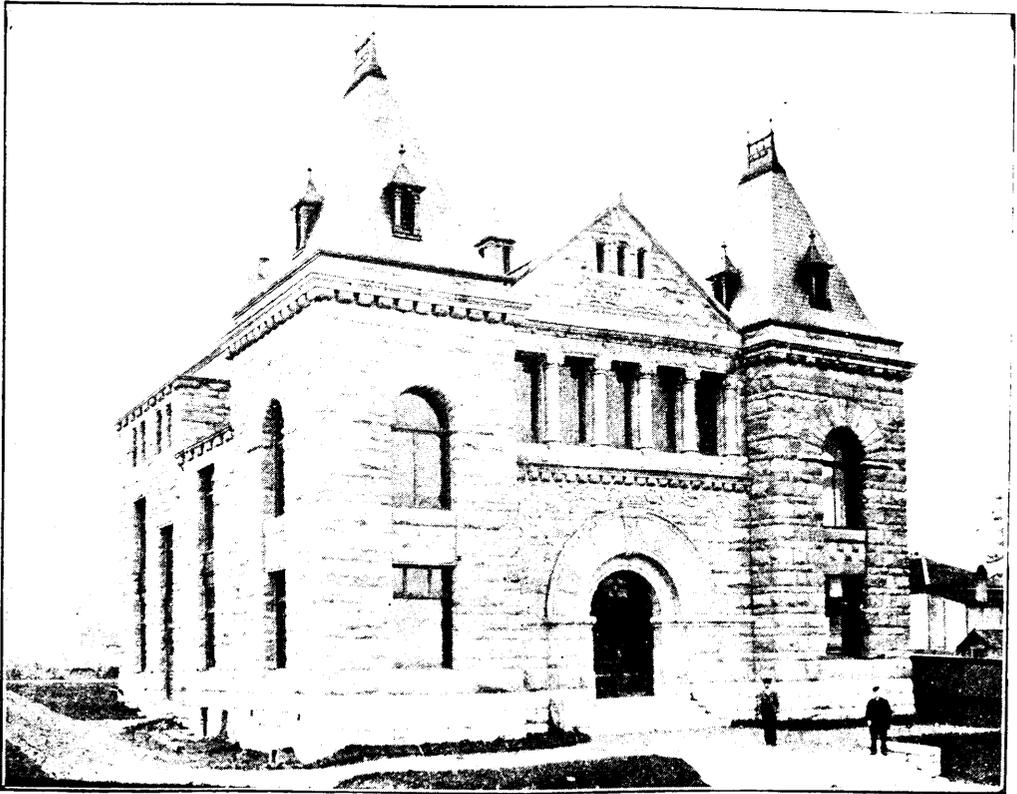
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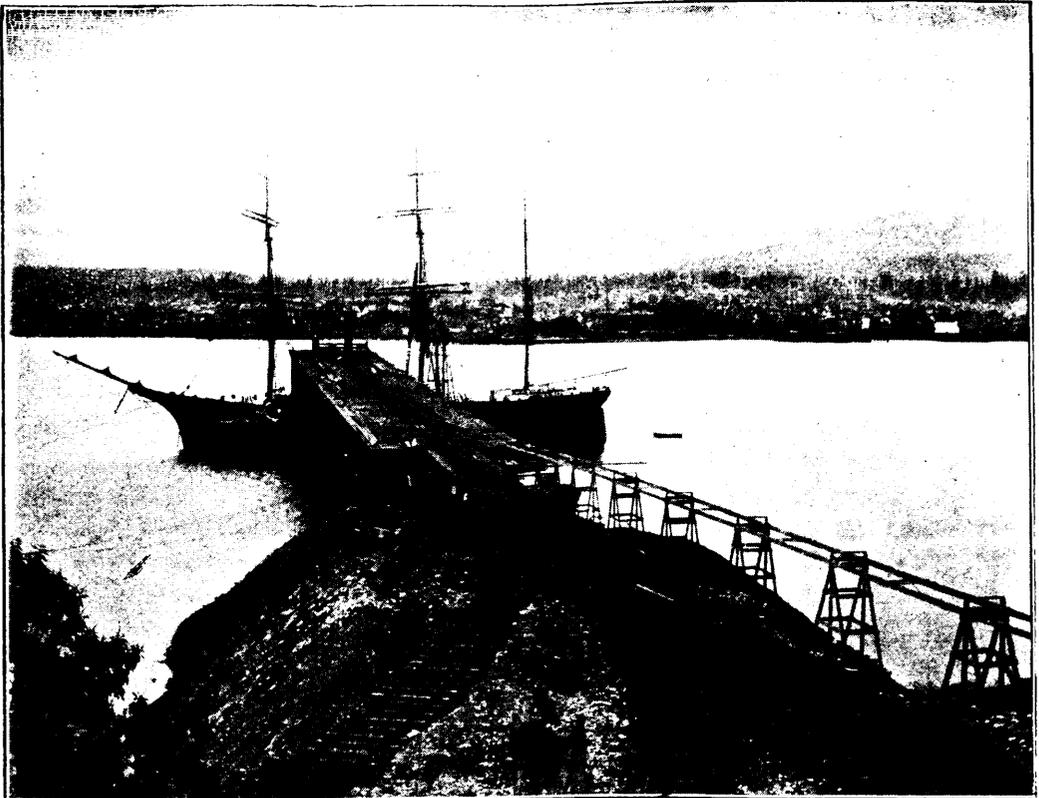
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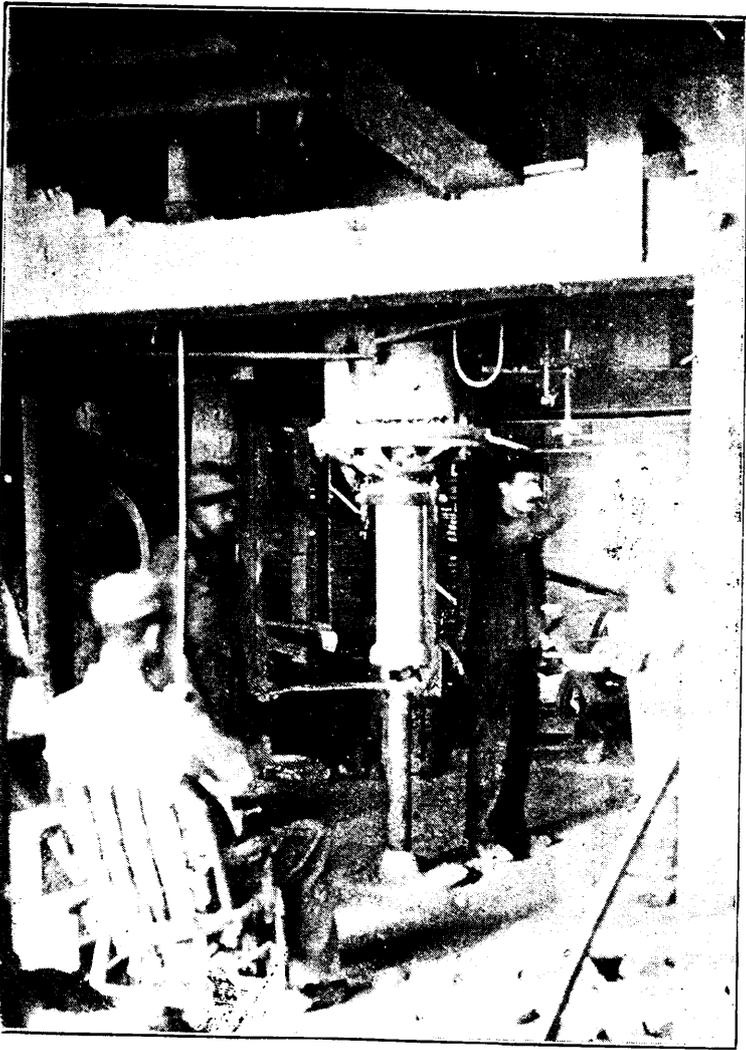
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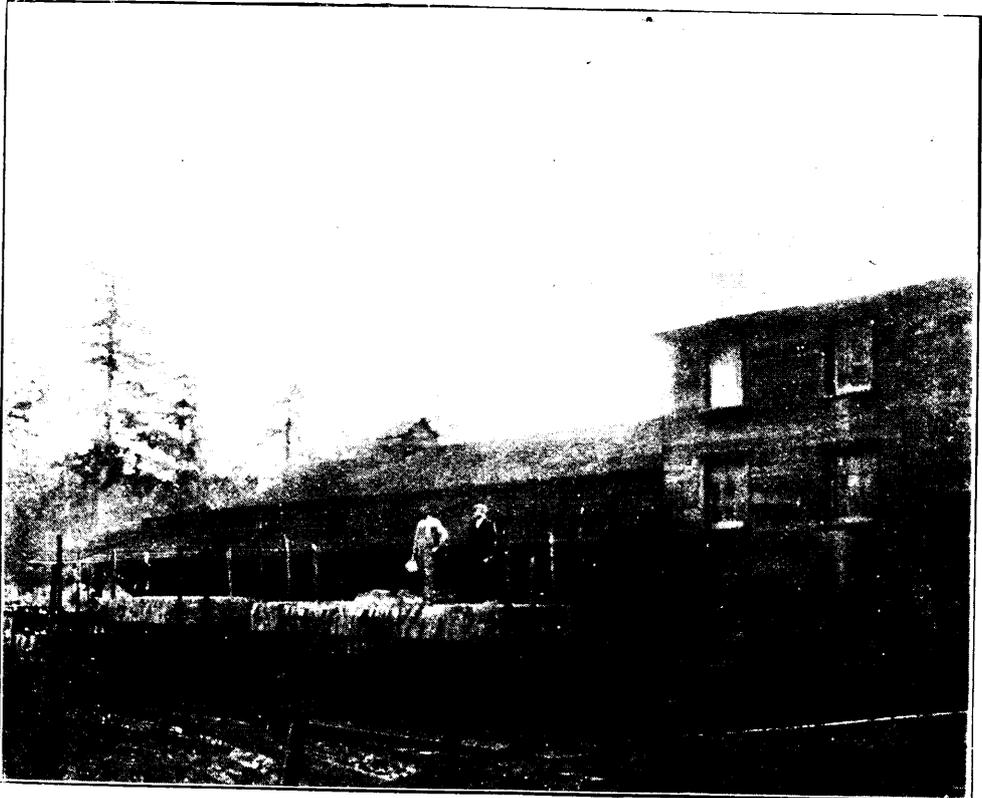
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that he was never surer of \$2,000 than he would have been if he had taken that bet.

This sort of thing was carried to such an extent that I put up notices to the effect that the length of the claims was regulated by act of the Parliament of Canada, and that no change could be made except by that Parliament, and telling the miners to take no notice of the threats that had been made.

Jim White then adopted another dodge, locating a fraction between 36 and 37, thinking that by getting in between he could force the owners to come to his terms, forgetting that the law of this country does not allow any man to play the hog. For three or four days this state of things kept the men in an uproar. I was making my survey, and getting up towards 36 and 37; when I got near, I delayed my operations and went up to 36, finding there would be no fraction, or at least an insignificant one of inches.

I took my time, and in the meantime the owner of 36 became very uneasy, and White also. I set in a stake down in the hollow until I saw how much fraction there was. I found only a few inches. I was very slow with this portion of the work, and the man who was with me seemed to have quite a difficulty in fixing the stake. Then I went down with the remark that I would do that myself. I had made it a rule never to tell anyone whether there was a fraction until it was marked on the post.

While I was standing by the post Jim White came up to me. He had a long way to go down the creek, he said—and he didn't want to wait any longer than was necessary. Well, I said, I can't tell you just yet exactly how much of a fraction it will be—but something about three inches. That is how Jim comes to be known now as "Three Inch White."

Bonanza and El Dorado Creeks afford between them 278 claims; the several affluences will yield as many more, and all of these claims are good. I have no hesitation in saying that about a hundred of those on Bonanza will yield upwards of \$30,000,000. Claim 30 below, on El Dorado, will yield a million in itself, and ten others will yield from a hundred thousand dollars up. These two creeks will, I am quite confident, turn out from \$60,000,000 to \$75,000,000, and I can safely say that there is no other region in the world of the same extent that has afforded in the same length of time so many homestakes—fortunes enabling the owners to go home and enjoy the remainder of their days—considering that the work has had to be done with very limited facilities, the scarcity of provisions and of labour, and that the crudest appliances only are as yet available. When I tell you that to properly work each claim ten or twelve men are required, and only 200 were available that season, it will give you an idea of the difficulties which had to be contended with.

On Bear Creek, about seven or eight miles above that, good claims have been found, and on Gold Bottom, Hunker, Last Chance and Cripple Creeks. On Gold Bottom as high as \$15 to the pan has been taken, and on Hunker Creek the same, and although we cannot say they are as rich as El Dorado or Bonanza, they are richer than any other creeks known in that country. Then, thirty-five miles higher up the Klondyke, Too-Much-Gold Creek was found. It obtained its name from the fact that the Indians who discovered it saw mica glistening at the bottom, and thinking it was gold, said there was "too much gold—more gold than gravel."

A fact I am now going to state to you, and one that is easily demonstrated, is that from Telegraph Creek northward to the boundary line, we have in the Dominion and in this province an area of from 550 to 600 miles in length, and from 100 to 150 miles in width, over the whole of which rich prospects have been found. We must have from 90,000 to 100,000 square miles, which, with proper care, judicious handling and better facilities for the transportation of food and utensils, will be the largest, as it is the richest, gold field the world has ever known.

You, Mr. Chairman, may wish to extend that down to the boundary line—but that of course I leave to you.

Stewart and Pelly, in the gold-bearing zone, also give promising indications. Everywhere good pay has been found on the bars, and there is no reason why when good pay is obtained on the bars, the results should not be richer in the creeks. The Klondyke was prospected for forty miles up in 1887, without anything being found, and again in 1893 with a similar lack of result, but the difference is seen when the right course is taken, and this was led up to by Robert Henderson. This man is a born prospector, and you could not persuade him to stay on even the richest claim on Bonanza. He started up in a small boat to spend this summer and winter on Stewart River, prospecting. That is the stuff the true prospector is made of, and I am proud to say that he is a Canadian. Applause.)

In regard to quartz claims, seven have already been located in the vicinity of Forty Mile and Dawson, and there is also a mountain of gold bearing ore in the neighbourhood yielding \$5 to \$7 a ton. The question to be considered is whether with that return it will pay to work under the peculiar conditions which exist and the enormous freight rates charged for transportation of anything of that kind.

About forty miles farther up the river two large claims have been located by an expert miner hailing from the United States, and who has had considerable experience in Montana and other mineral States, and he assured me that the extent of the lode is such that these two claims are greater than any proposition in the world, going from \$3 to \$11 a ton. On Bear Creek a quartz claim was located last winter, and I drew up the papers for the owner. He had to swear that he had found gold. He swore that he did, and he told me the amount, which, if true, will make it one of the most valuable properties that exists in the country.

On Gold Bottom another claim has been located, and I made a test of the ore. I had no sieve and had to employ a hand mortar, which you who know anything of the work will understand would not give best results. The poorest result obtained was, however, \$100 to the ton, while the richest was \$1,000. Of course, I do not know what the extent of the claim is, but the man who found it said that from the rock exposed the deposit must be considerable in extent. He didn't know whether the exposure was the result of a slide, but said that it would be an easy matter to find the lode.

About thirty miles up the Klondyke another claim was located, and the man swore that it was rich, although he would not say how rich.

On El Dorado and Bonanza the gold obtained on the different benches has about the same value, that is it has about the same degree of fineness, and is worth about \$16 per ounce, and as you go down the creek this value decreases to about \$15.25. From that point, however, it increases again, and from this the inference appears to be plain that the same lode runs right across the region that these creeks cut through, which is proved still more surely by the fact that the value increases as you strike Hunker, and in the other direction Miller and Glacier.

The nuggets found in El Dorado and Bonanza show no evidence of having travelled any great distance, and some I have are as rough as though they had been hammered out of the mother lode.

That mother lode is yet to be found in the ridges between the creeks, and when it is found it may be found to consist of several large lodes or a succession of small ones that may not pay to work.

On Stewart and Pelly Rivers some prospecting has been done and gold found, and on the Hootalinqua in 1895 good pay was discovered and the richness of the gold increases as work is continued farther down. Some men working fifteen feet down found coarse gold, when the water drove them out and they had to abandon the work and come out determined to return; but they did not go back, as in the meantime the Klondyke excitement knocked that place out.

Gold has been found at the head of Lake Le Barge, on the stream flowing into the lake at this point; in fact there is gold everywhere in this zone, which is 500 miles long by 150 wide. Prospects too are to be found on the Dalton trail on the other side of the Yukon River. A man riding along the Altsek trail was thrown from his horse, and in falling caught at the branch of a tree. As he drew himself up he saw something shining on the rock which fixed his attention at once. He picked it up and found that it was gold. Other excellent prospects have also been found along the same creek. From these circumstances and discoveries it may be assumed that in all this country there is gold, while in this particular zone it is especially abundant. This zone lies outside of the Rocky Mountains and distant from them about 150 miles.

Another product of the country that demands attention is copper. It is doubtless to be found somewhere in that district in great abundance, although the location of the main deposit has yet to be discovered. Mr. Harper was shown a large piece of pure copper in the possession of the Indians—indeed I have seen it myself. It comes from the vicinity of the White River somewhere—just where has yet to be disclosed. Silver has also been found, and lead, while to work our precious metals we have coal in abundance. It is to be found in the Rocky Mountains, or rather the ridge of high mountains running parallel to them in the interior. A deposit of coal in this range runs right through our territory. At two points near Forty Mile it also crops out, in one place only about forty feet from the river Yukon. Farther up the Yukon on one of its many smaller feeders, at Fifteen Mile Creek and on the head of the Thronda, there are also outcroppings of coal. On the branches of the Stewart and on some of the Five Fingers o

the Yukon coal is also exposed. In fact there is any amount of coal in the country with which to work our minerals when we can get in the necessary facilities.

Regarding the surface of the country and the difficulties of prospecting: Passing down the river in a boat one sees a succession of trees, ten, twelve, fourteen and sixteen inches in diameter, and he naturally comes to the conclusion that it is a well timbered country. And so it is, along the margin of the river. But let him land and go inland and he will find the ground covered with what is locally known as nigger grass. This is a coarse grass which each year is killed and falls, tangling in such a way as to make pedestrian progress all but impossible, tripping one up every few feet. It is as might be imagined a most difficult thing to walk through this grass, great areas of which are found all through the district. And where these areas are found the miners avoid them as they would the plague.

For the rest of the country, the rocks are covered by from one foot to two of moss—and underneath, the everlasting ice. On this a scrubby growth of trees is found, extending up the mountains. It is this which appears to those passing down the river in boats to be a continuation of the good timber seen along the banks. Timber that is fit for anything is scarce, and we should husband it carefully. Our timber has built Circle City. Our timber has served all the purposes of the upper Yukon country. A large amount of timber is required, and what we have we should keep for our own use, particularly as the ground has to be burned to be worked.

Above the timber line you come to the bare rocks—the crests bare save where clothed with a growth of lichen on which the caribou feed. There is no timber in the way here—no moss and no brush. The miners in travelling consequently keep as much as possible to the top of the ridge.

Prospecting necessarily has to be reserved for the winter. First, the moss has to be cleared away, and then the muck—or decayed rubbish and vegetable matter. The fire is applied to burn down to bedrock. The frost in the ground gives way before the fire, ten, twelve or perhaps sixteen inches in a day. The next day the fire has to be again applied, and so the work proceeds until the bedrock is reached. It may be twenty feet or so below the surface, in which case it is usually reached in about twenty days. Through this trees are found in every position, as they have fallen and been preserved as sound as ever in the everlasting ice. Having burned down to the bedrock and found the paystreak, you start drifting.

If you have a depth of twenty feet you may be able to go down two feet and no farther, and must put down another drift. Very few people have the good fortune to succeed with one shaft; prospecting holes as many as twenty or thirty must be dug until you cut the whole valley across before you find pay. The next man may strike it at the first hole.

To give you an instance: One man put down eleven holes, and didn't find anything, and yet other men had confidence enough in the claim to pay \$2,500 for a half interest in it, knowing that the owner had put in eleven holes and found nothing, a fact that will go to prove the character of the country.

After you have worked until April or May the water begins to run, and the trouble is that the water accumulates and you cannot work, as it puts out the fires which have been used to thaw out and soften the ground. Then the timber is prepared and the sluice boxes put in.

In one clean-up eighty pounds avoirdupois of gold was taken out, or a total value of about \$16,000. When you consider that the securing of this amount took the united labours of six men for three months, you can understand that there is considerable cost connected with the operation.

One man who owns a claim on El Dorado and one on Bonanza, has sold out, so it is said, for a million dollars; he went into the country a poor man, with the intention of raising sufficient money to pay off the mortgage on his place. He has, I believe, not only done so, but paid off those of all his neighbours.

Although these creeks are rich, and as I have told you more men have made home-stakes there than anywhere else in the world, I do not wish you to look only on the bright side of the picture. An American from Seattle came in June, 1896, to the Forty-Mile with his wife, with the intention of bettering his condition. They went out again last July, with \$52,000. I was well acquainted with this man, a very decent intelligent man. He told me one day that if he could remain in this country from three to five years, and go out with \$5,000, he would consider himself in luck. He has gone out with \$52,000, and after the prospecting he has done, a little in the middle and at one end of the claim, he believes that he has \$500,000 there.

On the other hand, however, a Scotchman named Marks has been in there for eleven years. I have known him well, and once last fall when he was sick, I asked him how long he had been mining. His reply was forty-two years—in all parts of the world, except in Australia. In reply to the question as to whether he had made his stake, he told me that he had never yet made more than a living, and very often that was a scanty one. This, of course, is the opposite extreme. I could quote scores of cases similar to that, so that I would not have you look too much on the bright side.

There are men in that country who are poor, and who will remain so. It has not been their "luck," as they call it, to strike it rich. But I may say that that country offers to men of great fortitude and some intelligence and steadiness, an opportunity to make more money in a given time than they possibly could make anywhere else. You have, of course, a good deal to contend with; your patience will be sorely tried, for the conditions are so unique that they have surprised many who have gone in, and they have left in disgust.

When I was in that country first, everything was well regulated and orderly, the miners attended to their business; they did not know anyone, and if a man kept himself pretty fair in his dealings there was no danger of trouble, but a few years afterwards saloons came into vogue, and many of the miners stayed around them all day. The saloon keepers were their partners, and miners' meetings began to be recognized, which were attended by the saloon-keepers and the loafers. They carried things just to please themselves, and great injustice was sometimes the result.

After giving some very interesting illustrations in regard to the unsatisfactory nature of the attempt at regulating the affairs of the country by the means of the miners' meetings, and contrasting the present conditions under the control of the properly appointed officials, which is so much more successful and satisfactory, Mr. Ogilvie concluded:

"We have in Yukon a vast region comprising from 90,000 to 100,000 square miles of untold possibilities. Rich deposits we know to exist, and all may be as rich. We know now that there is sufficient to supply a population of a hundred thousand people, and I look forward to seeing that number of people in that country within the next ten years. It is a vast inheritance. Let us use it as becomes Canadians—intelligently, liberally, and in the way to advance our country, Canada. Let us use it as becomes the offspring of the Mother of Nations."

At the conclusion of the lecture a very cordial vote of thanks, moved by Sir Charles Tupper and seconded by the Lieutenant-Governor, was tendered Mr. Ogilvie.

NANAIMO, B.C.

THE last point in British Columbia at which the intending Klondyker will call on his journey northwards is the city of Nanaimo, and at that place, too, most of the vessels returning from Alaskan points make their first call in British territory. Nanaimo possesses many advantages as a city, not the least of which is the safe and commodious harbour, and here the northward bound steamers generally receive their cargo of coal for the round trip.

Forty-five years ago the Hudson's Bay Company sunk the first shaft in the vicinity of the city and ever since then coal mining has been the principal industry. From a tiny settlement of a few houses, the early settlers being mostly immigrants from the Orkney Isles, the city has grown to be one of the most important in the province, and since incorporation in 1874 her growth has been steady and continuous. The many handsome business blocks, the general air of enterprise and prosperity observable by the visitor of but a few hours even, all testify to the wealth of natural resources enjoyed. Although coal mining is still the principal industry, the discoveries in recent times of valuable deposits of iron, gold and copper on the Island have increased materially the commercial importance of the city, and with the growth of the precious metal mining industry, now in the incipient stage, Nanaimo will take rank as a trade centre of note. Furthermore the existence of

large quantities of excellent timber and building stone in the immediate vicinity has assisted in the upbuilding of the town, and possessing an adequate and pure supply of water for domestic purposes and an excellent sewerage system must also be considered as a great advantage to Nanaimo from a residential point of view at least. Besides which, of course, the townspeople enjoy those concomitants of present day civilization, the telephone, electric and gas lighting systems, etc., without which, however, no British Columbia town would be up-to-date.

The visitor to Nanaimo will also be impressed upon arrival in the magnificent harbour with the admirable natural location of the city. Although the irregularity of the coast line has necessitated the laying out of the streets in the business quarter of the town on a crescent-shaped plan, the terraces upon which the residential portion is built are really an additional attraction as far as appearances go. The Provincial Building and the Court House, a handsome stone structure, is one of the finest in the province, and here the office of the Gold Commissioner for Nanaimo district is found. The old Bastion, a relic of by-gone days when the Hudson's Bay Company ruled the land, and erected a fort on this site, is well worth seeing. There is only one other bastion, we believe, intact in the province.

Railroad communication with the capital of the province, Victoria, distant seventy-three miles, and with the near-by city of Wellington, six miles to the north, is afforded by the Esquimalt & Nanaimo Railway, which passes through a rich agricultural and well-timbered country, and when the road is extended as at present contemplated, still further to the north, and probably westward to Alberni, where quartz mining is being vigorously proceeded with, Nanaimo will be the centre of a system of railroads, which will bring to her doors the riches of the farm, of the forest, and of the mine.

Regular steamship accommodation with the Mainland is provided by the steamer *Joan*, which makes daily week day trips between Nanaimo and Vancouver, the Pacific terminus of the Canadian Pacific Railway, capital facilities for travel being thus afforded. An excellent telegraphic service is also enjoyed by the city, and many of the rich "strikes" made in the Yukon region during the past summer, the news of which electrified the world, were first announced through telegraphic dispatches sent from Nanaimo by returning miners and others who called here *en route* homewards.

The New Vancouver Coal Mining and Land Company, whose mines are the largest producers on the Pacific Coast, have their wharves at Nanaimo, Departure Bay and Protection Island. At these wharves ships of the largest tonnage can be loaded at all stages of the tide. The company employ in their mines and works several hundred men, but the rule of "No Chinese need apply" is strictly observed. Mr. Samuel M. Robins, the Superintendent, is very popular with the people of Nanaimo, and his generosity and public-spiritedness displayed in many ways and on more than one occasion have won for him the respect and esteem of the community. This company have moreover invested a vast capital in the development of the coal mining industry, and much of Nanaimo's prosperity is directly due to their enterprise in the prosecution of this important business, for, thanks to their immense output, Nanaimo occupies the proud posi-

tion of being the largest exporting city in British Columbia.

But the prospective voyageur to the northern gold fields will probably be not uninterested in learning that in Nanaimo he can obtain everything that is needed to equip him for the trip upon which he is about to embark. He will find here large and well-stocked stores, whereat every prospector's need can be supplied, at, so say the advertisements, moderate prices, and as to quality, these goods are equal to anything you could get elsewhere in the province. Then naturally it must be remembered that the man who purchases his outfit in Nanaimo enjoys the same exemption from duty on entering the British Yukon territory as he would if he bought in any other Canadian town, and this is an important point, for if a man be foolish enough to purchase his supplies in the States, there is the devil, or rather the Customs official, to pay to the tune of twenty-five to thirty-five per cent. duty when the Canadian frontier is reached.

When the rich finds on the Klondyke River were first reported on the Coast, many of the residents of Nanaimo, because they were, practically speaking, born with a pick in their hands, were peculiarly susceptible to the gold excitement and many made tracks to the Yukon region. Several of those who were fortunate enough to strike it rich include some of the more prominent townsmen. Mr. W. J. Sloan returned early in the summer of the present year with upwards of \$60,000 in dust and nuggets. Mr. J. Wilkinson's gains were little if any less, and several other lucky Nanaimoites returned to their homes after but a few months' absence rich beyond the dreams of avarice. The good fortune which rewarded these gentlemen had the affect of adding to the excitement, and the exodus from Nanaimo during the latter months of the summer was very marked. It is hoped that the luck of their predecessors will also be theirs. The experience gained by the merchants of the city in outfitting the parties who have already left the city for the far north has been of great value to them in the work of supplying those who make Nanaimo their starting and outfitting point, with everything that is needed, and with nothing that is unnecessary, and those who invest money in outfits purchased in the city will find that they will receive courteous treatment, full value for the amount invested, and the advantage of the knowledge acquired by those who make outfitting a special item in their business.

PROVINCIAL OFFICERS.

Marshal Bray, Gold Commissioner, Government Agent, Assistant Commissioner of Lands and Works.
George Thomson, Clerk.

H. Stanton, Registrar of Supreme and County Courts and Collector of Voters.

Samuel Drake, Sheriff.

M. Bate, Assessor and Collector.

A. Dick, Inspector of Mines.

Wm. Stewart, Governor of Nanaimo Prison.

S. Drake, Assistant Gaoler.

A. Hamilton, Convict Guard.

Wm. Kirkham, H. McIndoo, D. Stephenson, C. W. Young, J. Belyea and Geo. Cassidy, Provincial Constables.

CIVIC OFFICERS.

Mayor—J. H. Davison.

Aldermen—North Ward: Murdoch Morrison,

Henry McAdie, Daniel L. Galbraith. Middle Ward: John D. Foreman, George Campbell, W. H. Morton. South Ward: Thomas Brown, James Bradley, Robt. Lamb.

City Clerk, etc.—Adam Thompson.

Assessor and Collector—E. B. Irving.

Auditor—Tully Boyce.

Police Magistrate—J. H. Simpson, J.P.

Chief of Police—J. Crossan.

Police Commissioners—His Worship the Mayor, J. H. Simpson, J.P., and A. R. Johnston.

COAST DISTRICT MINING.

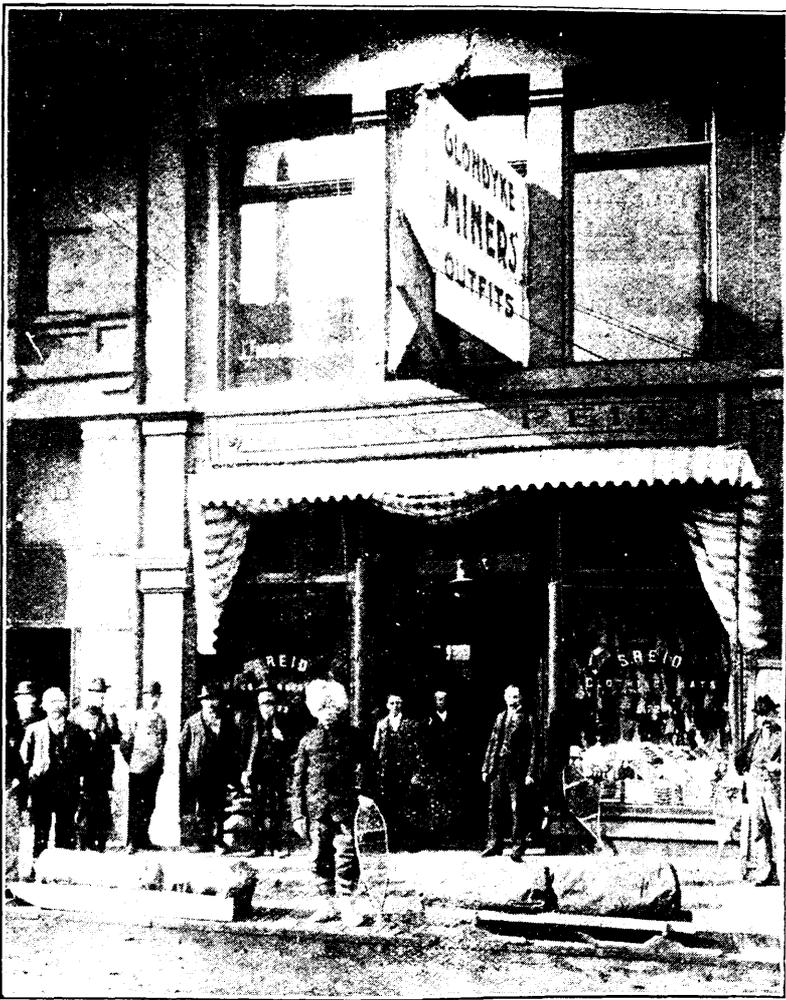
THAT portion of the Coast district which is tributary to Shoal Bay is going ahead in a very satisfactory manner. There has been no booming as yet. A better class of investors is opening up mines in the district, and prospectors are getting back from the beach and finding far better things up the mountains than any that were at first discovered by the beach-combers. The mountains between Frederick and Phillips Arms and between Phillips Arm and Loughborough Inlet are showing large leads of pyritous quartz carrying high values in gold even on the surface. Further west in the mountains bordering Discovery Passage and Johnstone Straits, both on Vancouver Island and the smaller islands, Valdez, Thurlow, Hardwick and Craycroft, very rich copper strikes are being made; and in most cases the copper, whether chalcopryite, bornite, or gray copper, carries good values in gold and silver. There seems little doubt that there will be a very large production of copper in this district at no distant date; but, until smelters are erected somewhere within easy reach of this section of the country, there is not much encouragement for the development of these properties. There seems to be some hope of the Swansea people putting up reduction works in Vancouver and if they do they should be able to do a large business up the coast. If the smelter and refining scheme now under consideration in Vancouver comes to anything, it should, if properly conducted, and managed so that shippers of copper ore can get a good value for it, and at reasonable rates for smelting, prove a great boon. My own opinion is, however, that a smelter run in connection with the coke ovens at Union Bay would be the most convenient. Lime for fluxing is fortunately very plentiful. It seems very doubtful, however, if those who own that portion of Vancouver Island have sufficient foresight to embrace the opportunity, and even if they did, unless their smelter business were run on a very different plan from their coal mines, and entirely without Chinese labour, they would get but little support from the quartz miners. While speaking of these people I may go on to say that it is a thousand pities that their policy of keeping prospectors off their Island Railway lands is persisted in. Their publication of a notice that they will attempt to extort a cash payment of twenty-five per cent. of \$5.00 per acre on every claim located on their land simply excludes the prospectors from it. I do not believe that they could collect this money legally, or that they could successfully conduct any proceedings against free miners working on their unoccupied lands for trespass; but the mere threat of such proceedings is sufficient to stop prospecting, especially when the Government land adjoining theirs is equally rich in mineral. I have personal knowledge of good prospects on their land of free milling

gold quartz, copper, refractory gold propositions and others; but under the existing circumstances I shall keep them dark and do everything that I can to discourage prospectors from going on their land, until there is some definite understanding as to the position of free miners prospecting and locating mineral claims on the Island Railway belt. Any cash payment beyond the recording fees is out of the question, even on an apparently high grade free milling proposition.

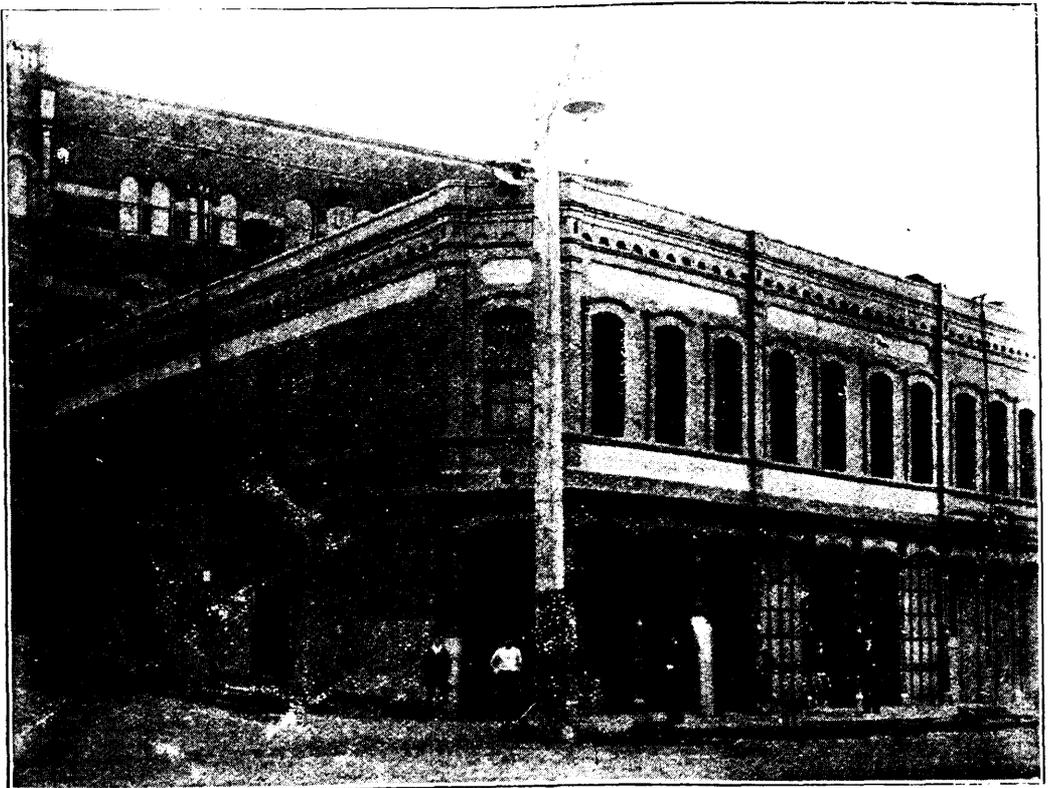
To come back to the actual work being done in the district and first to Shoal Bay itself. A townsite has been surveyed here on the front of 160 acres owned by the Gold Fields of British Columbia Company, commonly known as Grant-Govan's. The property is at the head of the bay and extends back to the valley which runs south into the heart of Thurlow Island. The bay faces Phillips Arm, and other property owners, Mr. D. McCallum on the west and Mr. P. Smith on the east side of the bay are in a position to sell lots. On the Gold Fields Company's land a good hotel called the Waverley has been built and this outfit also own a store. There are also on their land butchers, blacksmiths, barbers and bakers' shops and some private dwellings and a milk ranch. On Mr. McCallum's land is the Thurlow Hotel run by Mr. John McCallum and the store of Dave Cook, the Postmaster. Both hotels and stores have wharves where the steamers *Comox* and *Rainbow* make bi-weekly landings. An opposition townsite was started some time ago at Bickley Bay, about three miles further west but has proved so far a dismal failure and the large hotel built there has turned out a white elephant.

I may mention that the Smiths, who sold the townsite, hotel and store at Shoal Bay to the Gold Fields Company, are making another up Loughborough Inlet, which will undoubtedly be an important mining district shortly. Above Shoal Bay on the mountain side to the east is the Douglas Pine, pyrrhotite-copper-gold, prospect bonded by the B.C. Development Company, on which considerable work has been done both tunnelling and shaft sinking. It is now Crown granted property from which great things are expected. There are other excellent prospects on the same mountain which will shortly be developed. Several other properties on Thurlow Island—the White Pine, Excelsior, etc., have had work done on them but so far without result.

On the shore of the Mainland opposite Shoal Bay and at the entrance to Phillips Arm lies the Alexandria mine, which has had some eighty feet of tunnel driven into it from which several shipments of ore were made last year. This has a wide lead containing a low grade concentrating iron pyritous quartz and having a rich pay streak in the middle. Work on this claim including a useless crosscut some eighty feet long close to the entrance of the tunnel was apparently done by green hands and more than half the money spent on it has been wasted. The property is not now being worked but would pay well if a concentrating plant were run on the spot and the quartz looks very much as though some of it were free milling. Further up the Arm a tunnel was run in on the All-up but yielded no profitable result. Opposite here two tunnels were run in on the Ingersoll by the Channe Mining Company last year, but the money spent might as well have been thrown into the "salt



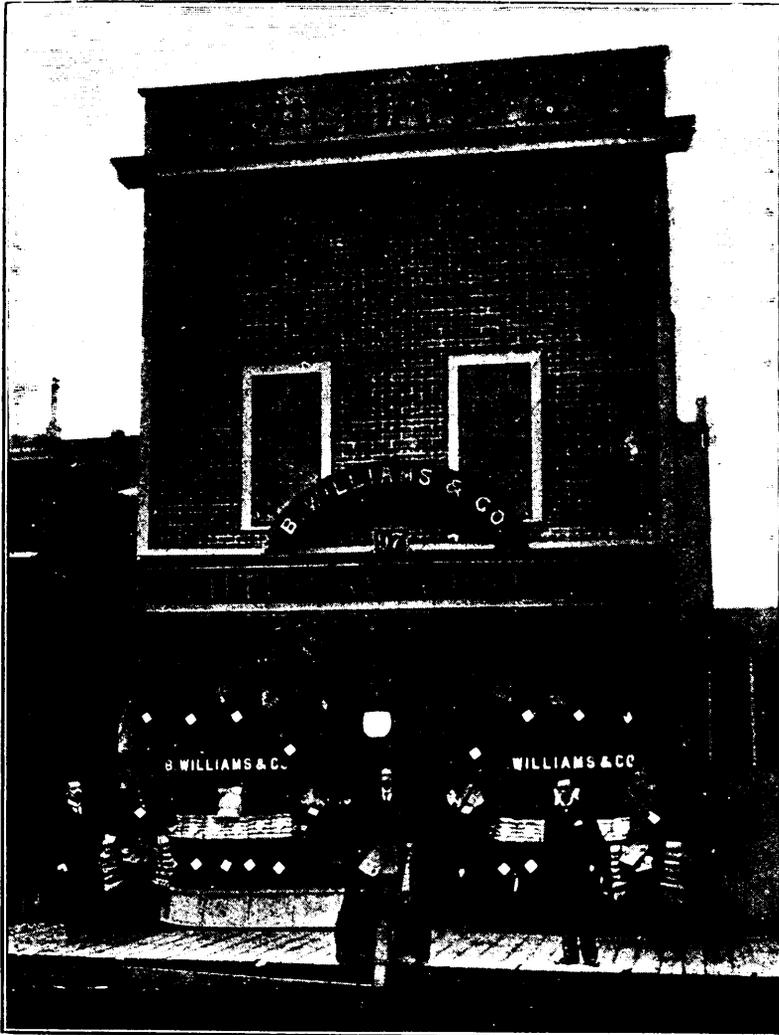
SAMUEL REID'S CLOTHING STORE, VICTORIA, B.C.



W. S. FRASER & COMPANY, (LATE MARVIN & TILTON), VICTORIA, B.C.



GEO. D. SCOTT,
B.C. MANAGER LONDON & LANCASHIRE ASSURANCE CO., VICTORIA, B.C.



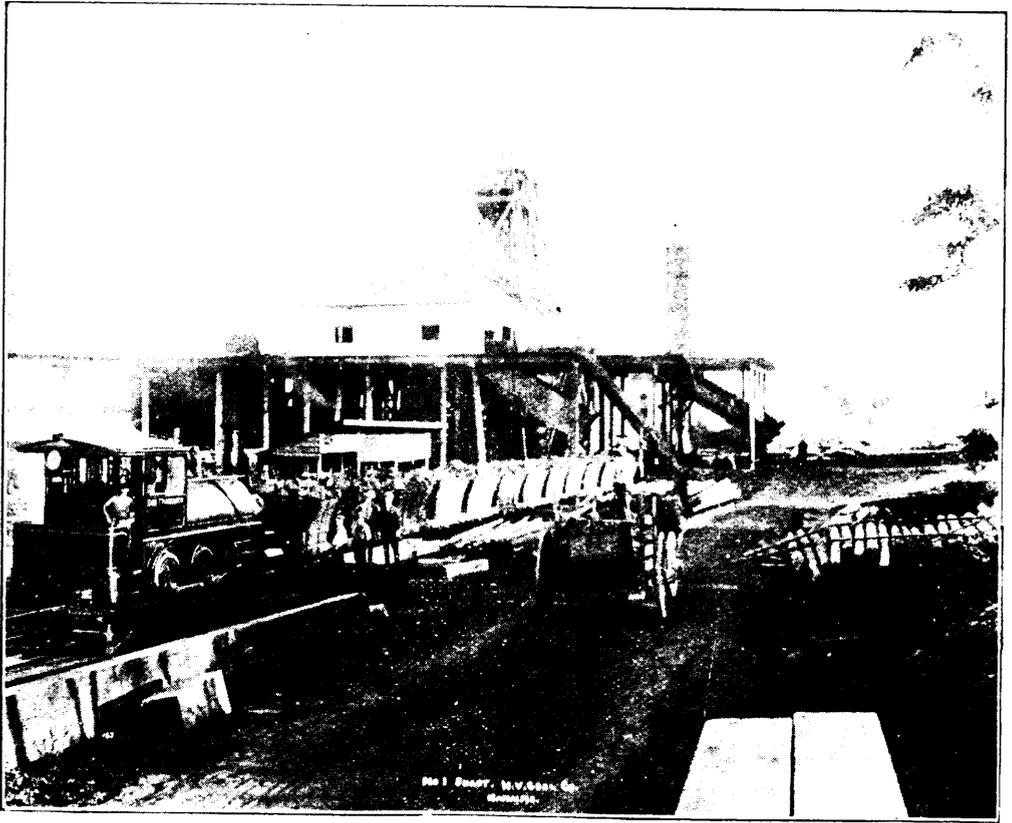
B. WILLIAMS & CO., GENT'S FURNISHERS, JOHNSON STREET, VICTORIA, B.C.



W. H. MORTON'S HARDWARE STORE, NANAIMO, B.C.



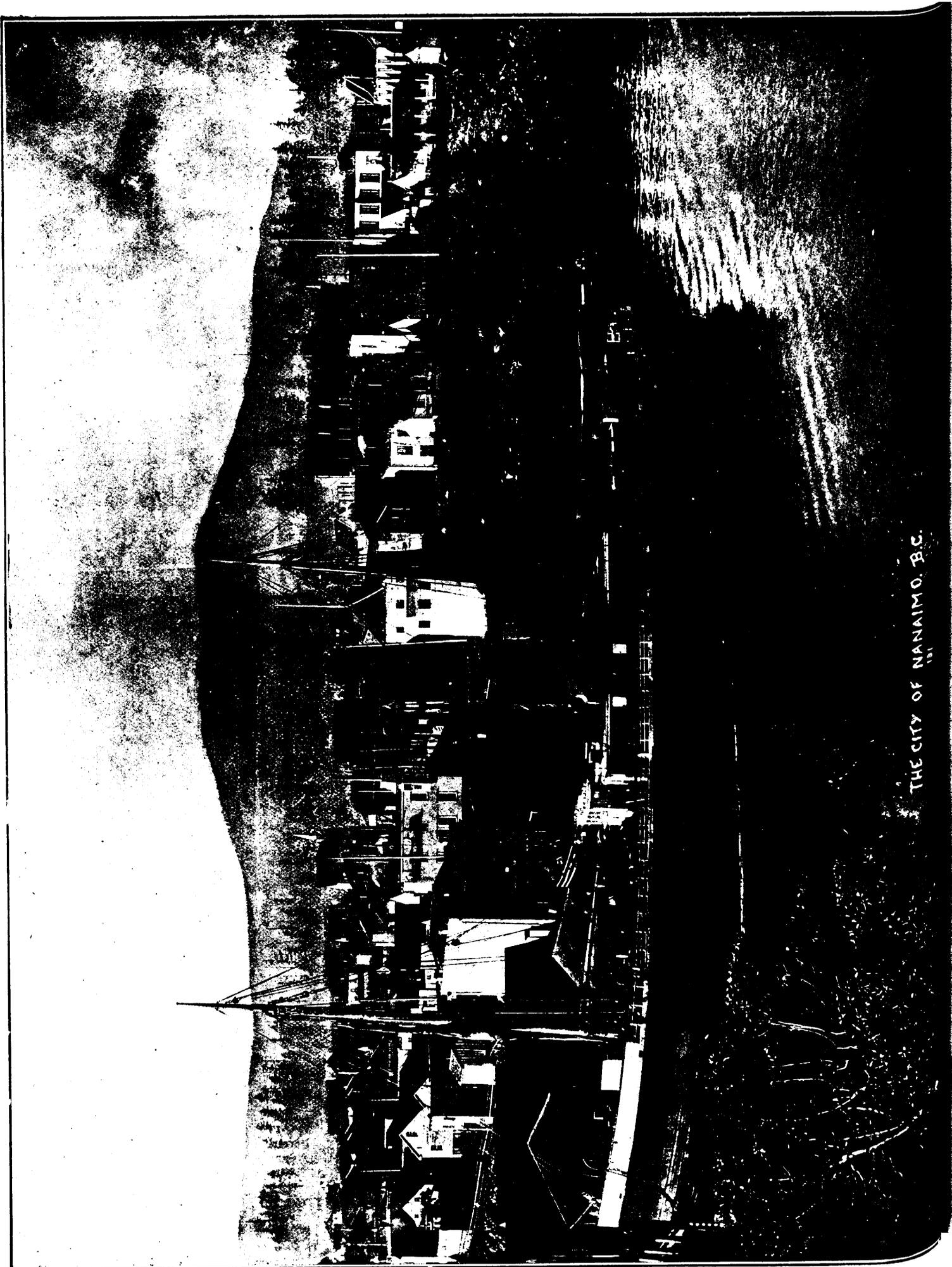
TAYLOR, SMITH & COMPANY, NANAIMO, B.C.



NEW VANCOUVER COAL COMPANY'S NO. 1 SHAFT, NANAIMO, B.C.



E. PIMBURY & CO., NANAIMO, B.C.



THE CITY OF NANAIMO, B.C.

CITY OF NANAIMO, B.C

chuck." Just beyond the Ingersoll the Annie Laurie group of four claims has lately been sold to the Fetherston and Leonard Syndicate of Vancouver who propose to do work on one of the claims, probably the Iris, forthwith. These claims show a large lead of quartz heavily mineralized with iron pyrites carrying some copper and gold on the Annie Laurie, where it is cut by Shirley Creek, and on the Iris showing the same lead with a shute of rich copper-gold and silver ore, assaying well over \$300 on the surface. This property is most conveniently situated for economical working and as it is supposed to be on the famous Blue Bells lead (which will shortly be alluded to) and it is hoped that it will turn out well.

Returning to the opposite side of the Arm, where Fanny Bay runs west into the mountains: on the north shore at the entrance is the Coon mineral claim on which some gophering and scratching was done by Messrs. Monckton and Colquhoun, of the so-called B.C. School of Mines, but in spite of wonderful reports of rich and high grade streaks of rock which were said to have been struck here, no result has followed. On the mountain side, about 2,000 feet up, on the south side of Fanny Bay is the Dorothy Morton, one of a group of claims owned and bonded by Mr. Laing, late of Johannesburg in South Africa, which is being diligently developed under the management of his very popular partner, Mr. Ryan, by whom I am informed that they are very well satisfied with the results so far attained. They propose shortly, or as soon as this fine lead of quartz carrying iron pyrites with high values in gold has been proved to a sufficient depth, to instal an electric plant on a water power opposite Bickley Bay and about three or four miles from the mine, and carrying the power from there, to treat the ore by the cyanide process on the spot where it is extracted. Other claims on this same lead carrying similar ore on and over the mountain towards Loughborough Inlet have given assays of over \$100 on the surface, and it seems certain that there is a great future before this neighbourhood.

On the same mountain side is a claim on which some work has been done by Mr. Hoare and is said to make a good showing. Over the summit and down towards Loughborough Inlet to the northwest are some claims located this summer by Messrs. Macguire and Moore on which is a wide lead of very good looking quartz from which assays of over \$60 have been obtained on the surface. This also is a similar pyritous and refractory ore carrying nearly all the assay value in gold. On the mountain at the entrance to Phillips Arm on the east and about 1,500 feet up lies the Mainland group of claims, two of which, the Mainland and Don, are now owned by Messrs. B. B. Johnson, of Vancouver, and his father and brothers-in-law, Messrs. Andrews, Howe and Cross, who are doing some development work on the Don.

Above these and to the northeast are the Kicking Horse group of four claims on which some work which discloses a large body of magnetic iron with strong indications of its being only the capping of a large copper lead, has been done.

On the other side of this mountain, and some 1,500 feet above the entrance of Frederick Arm on the west side lies the celebrated Blue Bells group and the Ohio. On the Blue Bells, which has been bonded by the London and Vancouver Development Company, represented by Mr. Pellew Harvey, of Vancouver, a

twenty-six foot shute of solid pyrrhotite has been crosscut at a depth of eighty feet, and further work is in progress to again crosscut the same lead at a depth of, I believe, over 200 feet. This ore has no copper and carries a value, it is said, of \$27 in gold all across the twenty-six feet, and in parts has given assays of \$90 and over \$400 in gold. All ore taken out is being saved and should the same body be found at the lower level, I understand this property will forthwith be stocked on the English market, and will if properly managed, be one of the finest refractory propositions yet discovered. This ore will probably be also treated on the spot by the cyanide process. Adjoining the Blue Bells is the Ohio on the same lead showing the same pyrrhotite with high values in gold and it seems almost certain that this will prove an equally valuable property.

At the head of Frederick Arm is a large salt lagoon called Estero Basin, on the north side of which some 1,500 feet up the mountain is a large lead of quartz carrying chalcopryrite with some gold and silver, and on two claims on this lead which were purchased last winter by Mr. Cobledick there is a fine showing of mineral. No work has been done as yet on any of the claims in this section; but a Colonel Forsyth, said to be a Chicago millionaire, who owns some claims on the same lead, has on a good water power on the east side of Frederick Arm spent a lot of money in putting up a water wheel and making preparations for some kind of smelter or reduction works.

On Channe Island and Valdez Island all down the south shore of Cardero Channel to below the Euclataw Narrows claims have been staked on a gigantic dyke of argillites and quartzites which are probably a huge mass of triassic bedded rocks folded till they stand on edge and with mineral deposited between the contacts of the strata all along the strike. Many of these claims have great showings of pyritous quartzes carrying gold, silver and copper, but on none of them has sufficient work been done to make any satisfactory showing.

On the northwest corner of Valdez Island close to the contact between these beds and the granite and on the east end of Channe Island the Channe Mining Company did considerable work last summer, driving some tunnels, and doing some sinking, but with no practical result (as was the case with all the work done by them). On the Queen Bess, which is up the mountain on the northwest corner of Valdez Island, above where the Channe Company's work was done, a shaft of some sixty feet was put down on a well-defined but small lead of quartz which carries a good value of free milling gold; for some reason, however, probably want of funds, work has been discontinued on this property. Below the Euclataw Narrows on Stuart Island is a magnificent surface showing of copper ore on a claim which has been purchased by Mr. Cobledick. It seems highly probable that there is a strike of copper right through from Lasqueti and Texada Islands in a northwest direction, showing in Malaspina, on Redonda Island, in Pryce's Channel, on Stuart Island, on Estero Basin, in the mountains north of the head of Phillips Arm, and again showing in Knight's Inlet.

Away to the west on Discovery Passage and Johnstone Straits, both in the mountains on the east coast of Vancouver Island and on the west shores of Valdez, Thurlow and the other islands bordering on this channel, very rich discoveries of copper have been

located. The two best showings occur on the Sunset and adjoining claims in George Brown's Bay, one mile north of Seymour Narrows on Vancouver Island, and about one mile inland; and nearly opposite there on the Ajax and Lightning and Extensions on Valdez Island about a mile back from the beach in Deep-water Bay, work is being done by a Shoal Bay syndicate who have made arrangements to sell ore to the Swansea smelter people through their agent, Mr. W. Pellow Harvey, in Vancouver. On this lead nine claims have been located and the copper is visible on the surface over the whole length. At the lowest point on the lead where the the work is now being done there exists on the surface a large deposit of gray copper, or copper glance ore, which goes over forty per cent. in copper, besides carrying gold and silver to the value of over \$25. The owners of this property confidently expect to make it the first shipping mine in the district. The ore is so rich that it is saleable for cash as fast as it can be taken out.

There seems to be but little doubt that there is here also a huge strike of copper traceable from claims located some miles inland on Campbell River on Vancouver Island, all along both sides of Discovery Passage and Johnstone Straits. Undoubtedly the increasing demand for and price of copper will cause a large output from this district in the near future.

WALTER HARVEY.

PORT RENFREW.

COMPARATIVELY a new district, which, owing to its fishery advantages was first reserved for the Crofters, Port Renfrew about four years ago was thrown open for settlement. At present there is a white population of about one hundred, and fifty Indians. It is situated on the San Juan Harbour fifty miles from the city of Victoria on the west coast of Vancouver Island and is the commencement of inland navigation and the Pacific Ocean.

The San Juan and Gordon Rivers empty into the harbour at Port Renfrew. They run through large valleys of good farming land, principally clay loam. The valleys are covered with valuable timber consisting principally of cedar, spruce, fir, hemlock and white pine. As the spruce is in abundant quantities and of a great height before reaching the limbs, a pulp mill would be a good industry for this part as the material and shipping advantages cannot be surpassed in any other part of America. A saw-mill is very much needed. There are several thousand acres of timber limits on the San Juan River. For the last thirty years this part of the Island has been prospected for placer gold with varying success. About a year ago prospecting commenced for ledges with satisfactory results to the prospector and now there are about 140 mineral claims taken up on the Gordon River. The country rock is granite and the ledges are principally between limestone and diorite. The lodes vary from six to forty feet and are mostly copper pyrites or chalcopyrites with the characteristic capping of magnetic iron. The country rock changes on the San Juan River to a mineralized slate formation and the lodes are quartz cappings. Several assays have given very high results in gold and silver. There has been development work done during the past summer on several ledges with satisfactory results to the owners. The formation along the Straits changes to sandstone

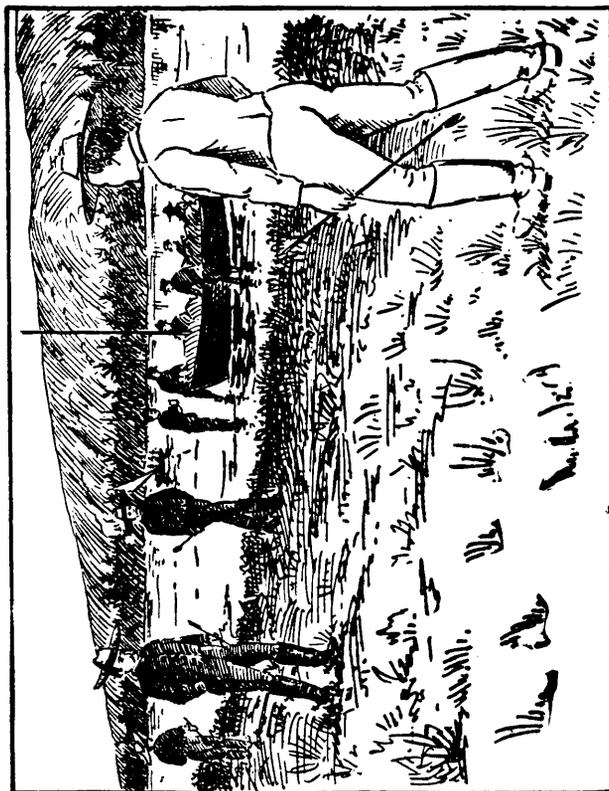
and conglomerates. Between San Juan and the Jordan River coal croppings are to be found. There is also a large tract of agricultural land not yet surveyed. The local Government is building a waggon road from Victoria to Port Renfrew and expects to have it completed by next summer. The road is badly needed and will be the means of opening up a large tract of land. Altogether things look bright for this near-by settlement, and with its many resources it should enjoy a very prosperous future.

COLLECTING CUSTOMS AT LAKE TAGISH.

THE rich gold mines of the Klondyke are in Canada. Duties averaging twenty-five per cent. of the cost of every outfit bought anywhere in the United States must be paid by every person going to these mines upon entering Canadian territory.

The Customs post established at the foot of Lake Tagish is at the junction of the Skagway and Dyea Trails, over which the gold-seekers travel on their way to the Klondyke. It is guarded by an armed force of twenty-five men.

The miners who bought their supplies at Seattle and other places in the United States were an angry crowd when they arrived at the Tagish Lake Customs



post. Those who had cash had to pay twenty-five per cent. of the cost of their outfits, and those who did not have money had either to give up a quarter of their year's provisions or remain at the post for a few weeks sawing wood and helping to erect the Government barracks. The men who had bought their outfits in Victoria, which is in Canada, upon showing their papers passed on without delay and without payment. Some of them were lucky enough to find rich mines at the Klondyke before those detained at Lake Tagish sawing wood for duties were able to reach the diggings. The railway fares to Victoria are the same as to Seattle and miners' supplies

are as cheap. Miners for the Klondyke who buy their outfits at Victoria from which steamers for the mines are leaving almost daily will save one-quarter of the cost of their outfits by purchasing at that city, which is the capital and commercial centre of British Columbia. Those intending to go to the Klondyke in the spring should write to the Secretary of the Board of Trade, Victoria, B.C., who will freely supply all information asked for.

ABOUT THE ROUTES.

THERE are several ways of getting into the Yukon from Victoria, as indicated by the outline map herewith.

The route *via* St. Michael is not much availed of by passengers. It is very circuitous and expensive and rough weather is frequently experienced.

From the head of Lynn Canal there are three routes over the Coast Range of mountains, namely, *via* White Pass, Chilkoot Pass and Chilcat Pass. The principal travel this year has been over the White Pass and Chilkoot Pass, but they are now so badly cut up as to be almost impassable. Transportation over these passes between salt water and fresh water, distance thirty-six miles, has cost \$700 per ton and at present no one can be found to engage in the business at this rate.

It is certain that the travel next year will be principally *via* Stickeen River and Teslin Lake. There is an established line of steamers between Victoria, Vancouver and Nanaimo and Wrangel, mouth of the Stickeen River, where connection is made with steamers which transport passengers and freight to Telegraph Creek. The journey from any of the British Columbia coast cities can be made comfortably in six days. There is good land travel between Telegraph Creek and Teslin Lake (120 miles). The country is open and undulating, the grade not exceeding 200 feet in any one mile; excellent grass abounds for pack animals the entire distance. The Dominion and British Columbia Governments have surveyors in the field making thorough investigations with a view of locating the line of a railway, which it is expected will be under construction next spring. Parties who went over the present trail for the first time report it to have been easy travelling for horses packing 300 pounds. A steamer is being built on Teslin Lake and will be ready for the opening of navigation next May to carry passengers and freight to the Klondyke River. The Stickeen-Teslin Lake route to Klondyke avoids the dangers and hardships which are experienced on the mountain passes and the White Horse and other rapids, on the route *via* Lynn Canal.

The Stickeen-Teslin Lake route has another very great advantage in the fact that the prospector upon leaving the steamer at Telegraph Creek finds himself in a country not fully examined. Many parties will detour towards Omineca and through Cassiar prospecting a country known to be rich in gold.

CANADIAN DUTIES.

It is important to remember that all supplies for the gold fields are dutiable if purchased outside of Canada.

OUTFITS AND PRICES.

All supplies for the miner, prospector and trader can be purchased in any of the cities of British Columbia at lower prices than at any other place offering on the Pacific Coast of the United States, besides which the duty, thirty-five per cent. on many goods, is saved.

MAPS OF THE GOLD FIELDS.

ONE of the most difficult things to obtain is a good map of the northern gold fields. Many maps have been issued in the States and Canada, but nearly all of them are inaccurate and misleading, some to such an extent in many important particulars as to render them worse than useless. The most complete and most accurate map of the Klondyke ever issued is from the presses of the Province Publishing Company, of Victoria and Vancouver. Thousands of copies of this map have been sold and the publishers have found it necessary to prepare a second edition which is now ready. It is printed in three colours and shows every important point of interest to prospectors and those who have friends in the far country. This map has been prepared from official sources and is thoroughly reliable, the press of Canada speaking of it as one of the handsomest and most creditable maps ever put on the market. It is prepared in three forms, the prices being: Plain paper, 50c.; mounted on cloth, 75c.; mounted on cloth and in waterproof folder, \$1.00. It may be procured generally at the bookstores or will be sent to any address on receipt of price by the Province Publishing Company, (Ltd. Lty.), Victoria, and Vancouver, British Columbia.

FACTS ABOUT VICTORIA.

VICTORIA, where a large part of the entire outfitting trade of the Yukon will be done next spring, is the capital of British Columbia. It is situated on Vancouver Island and is kept in touch with the Mainland daily by the steamers of the C.P.N. Co. Its population is, roughly speaking, about 20,000, and it is here that the Legislative Assembly buildings—generally conceded to be much the finest governmental buildings in Canada—are situated. Victoria was incorporated in 1862 and is one of the most important seaports on the western coast. It has large wholesale and manufacturing interests and is well equipped with retail stores where anything from a needle to an anchor may be procured. As a purely residential city, it is one of the most charming places in the world, its climatic advantages and scenic beauties having attracted people from all quarters of the globe. An illustration elsewhere in this issue, taken from the roof of the new government buildings, will give some idea of the city's extent and appearance and assure intending outfitters that they can have their every want supplied here. The country round Victoria is rich in minerals of all sorts and there are vast coal deposits on the Island and rich and fertile valleys for the pursuit of agriculture. The city has many churches and there is a good theatre and several music halls.

Prominent Business Houses in Victoria.

OKELL & MORRIS FRUIT PRESERVING CO.

One of the most important and thriving industries in Victoria is the Okell & Morris Fruit Preserving Company, the firm being the largest fruit canners and preservers in British Columbia. Their line of manufactures includes confectionery in all its branches, lemon, orange and citron peels, pickles, catsups and vinegar, whilst to prove the versatile capabilities of the firm they have put upon the market a line of evaporated vegetables equal to the finest imported. They have earned the unanimous praise of all wholesale men, and experienced miners have backed their good opinion up by purchasing large quantities of them.

The Okell & Morris Fruit Preserving Company was started in 1892 by Messrs. Okell & Morris, who, on account of the rapidly increased trade, had to form it into a limited liability company. It has, from its inception, been of much convenience to both fruit growers and consumers. Mr. Price, who is now the managing director of the company, is a man with a large and varied experience, who has, since his connection with the firm, earned for it the highest honours. An expert at all the branches of the business this company carries on, he is able to give the goods turned out his close personal attention, thereby ensuring to his customers the guarantee of first-class work.

Okell & Morris have claimed for years that their goods are absolutely the finest and best and by the large business done it is evident the consumers have every confidence in their manufactures. The factory extends over considerable ground from Work Street down to the edge of the bay, a distance of 200 yards, and thence to a building standing on a wharf in the bay another hundred yards. The factory is fitted up with the most up-to-date machinery and a plant not to be equalled on the Coast. The increasing trade done by the Okell & Morris Company proves that the people are not slow in catching on to a good thing. This company's trade extends to every corner of British Columbia, and there is no doubt that they have done much towards breaking down the strong prejudice which formerly existed against home manufactured goods. They have a record of having taken every gold and silver medal awarded for purity and excellence of quality. Fifteen gold and silver medals and thirty diplomas is a record to be envied. To those in doubt it may be said: Ask for Okell & Morris' manufactures and you will be satisfied.

BRITISH COLUMBIA POTTERY CO., LTD.

The British Columbia Pottery Co., Ltd., at Victoria, B.C., was established about 1890, the present company being incorporated about two years ago. Its officers are: Mr. G. F. Vernon, chairman; Mr. Joseph Hunter, M.L.A., secretary; and Mr. A. F. Barham, manager. The works are situated on the Esquimalt & Nanaimo Railway about a mile from the city, having a siding for the convenience of loading and unloading cars. The ware made here is salt glazed vitrified sewer pipes of all sizes with branches, bends,

gully traps and all fittings, fire brick, fire clay and all kinds of clay goods. Architectural: terra cotta chimney pipe and tiles. Agricultural: drain pipes, flower pots and other articles too numerous to specify. A recent departure is a vitrified paving brick, specimens of which can be seen at the Five Sisters Block, corner Fort and Government Streets; the new *Colonist* building on Broad Street and on Johnson Street. This brick makes a good and durable permanent sidewalk, easy to keep clean and free from dust, and at the time when there is so much agitation in favour of good streets and sidewalks, it seems a pity that the city authorities cannot see their way to paving the principal business streets with a permanent and enduring sidewalk of this description instead of perpetually renewing wooden sidewalks with all their attendant evils, sanitary and otherwise. Illustrations in this issue show the process of manufacturing sewer pipes—which is here done with a forty-inch cylinder Barber press—and cars being loaded with fire brick and blocks for the Union Colliery Company's coke ovens at Union, B.C., they having found the local fire brick equal in all respects to the imported and accordingly placed their order with the company. The factory is a three-story building with a basement in which are the engine and boilers, and an annex with a large drying floor space built over the kilns. There is also a drying floor heated with flues for the purpose of drying goods quickly when necessary. The grinding and mixing is done by the dry and wet pan process which have been remodelled and arranged to do away with the double handling of the clay, which was a fault in the old system. A new stack has also been recently added, and altogether the plant is in good shape and capable of turning out a large quantity of wares of a good quality. The works are in charge of Mr. G. Gibbon, a native of Scotland, who is thoroughly conversant with all work of this description.

W. J. PENDRAY.

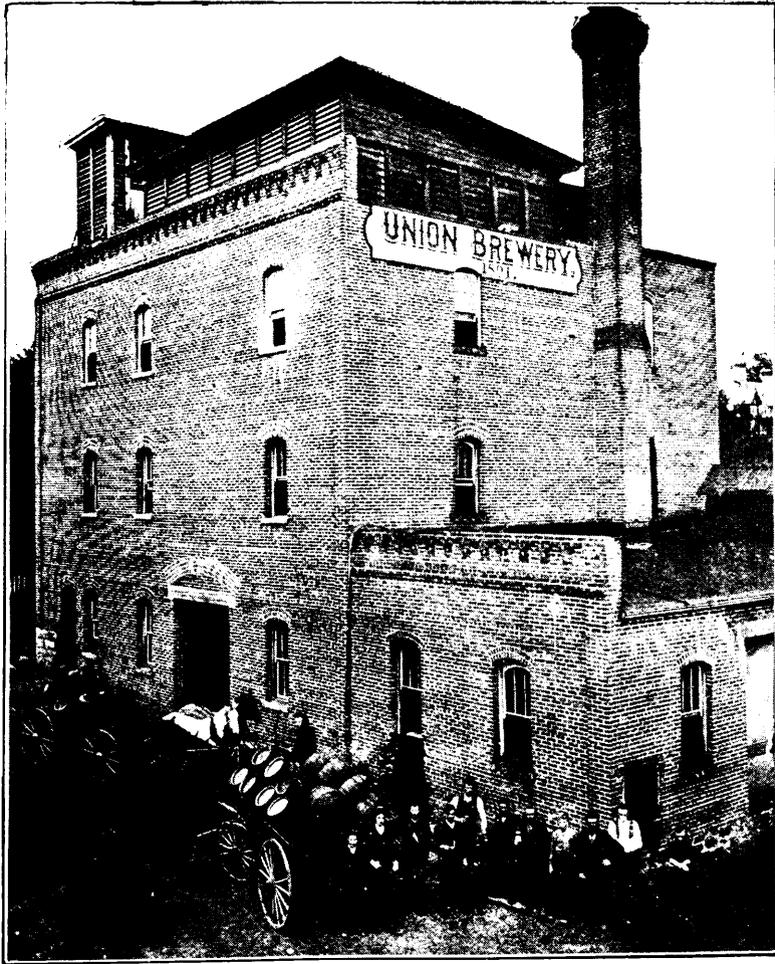
For completeness of every detail the factory of W. J. Pendray is a revelation. From the most important process of soap boiling to the minor ones of box making and label printing every necessary apparatus is included in the establishment. Mr. Pendray's specialties are the manufacturing of soap, soda, blacking, washing powder, blueing, stove polish, horticultural sprays and cardboard boxes, and the fact that at the Colonial Exhibition in London, Eng., the superiority of the firm's display was recognized by the award of a medal is proof sufficient of the general excellence of the wares turned out of the factory. Gold and silver medals, silver tea services, and an almost innumerable collection of diplomas have been awarded to Mr. Pendray at the various exhibitions in British Columbia and elsewhere whenever he has entered into competition with his business rivals. Established in 1875, the Pendray manufactory has now a reputation which extends from the capital of British Columbia to the eastern extremity of the continent and the volume of business done increases yearly. The factory occupies a most desirable site



"FREE PRESS" OFFICE, NANAIMO, B.C.



NANAIMO STEAM CARRIAGE WORKS. (CRAIG BROS.)



UNION BREWING COMPANY, NANAIMO, B.C.



J. TAYLOR'S STORE, NANAIMO, B.C.



STEVENSON & CO., DRY GOODS STORE,
NANAIMO, B.C.



STEVENSON & CO., NANAIMO, B.C.



NANAIMO BASTION AND HARBOUR AND N. V. C. CO.'S WHARF.



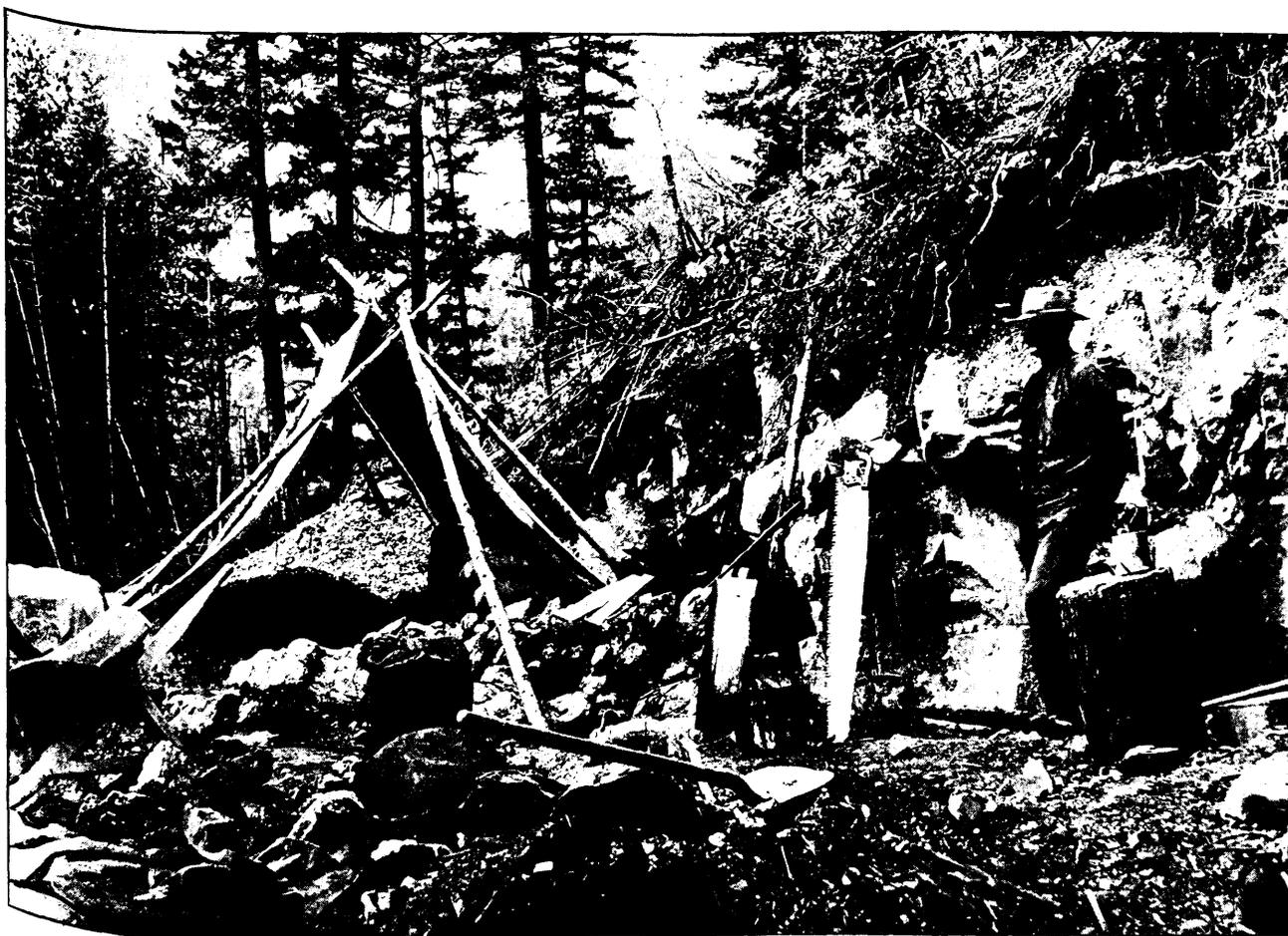
ANDREW HASLAM'S RESIDENCE, NANAIMO, B.C.



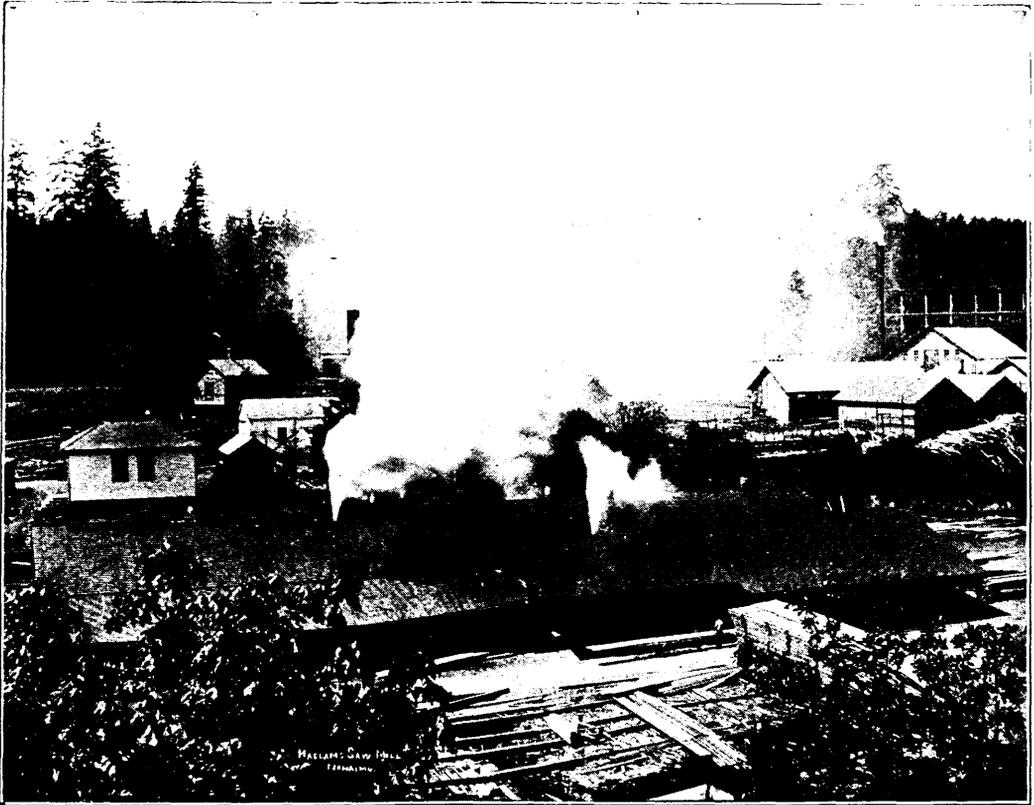
HOTEL WILSON, NANAIMO, B.C.



PROSPECTORS STARTING OUT.



FIRST WORK ON A MINE.



A. HASLAM'S SAWMILL, NANAIMO, B.C.



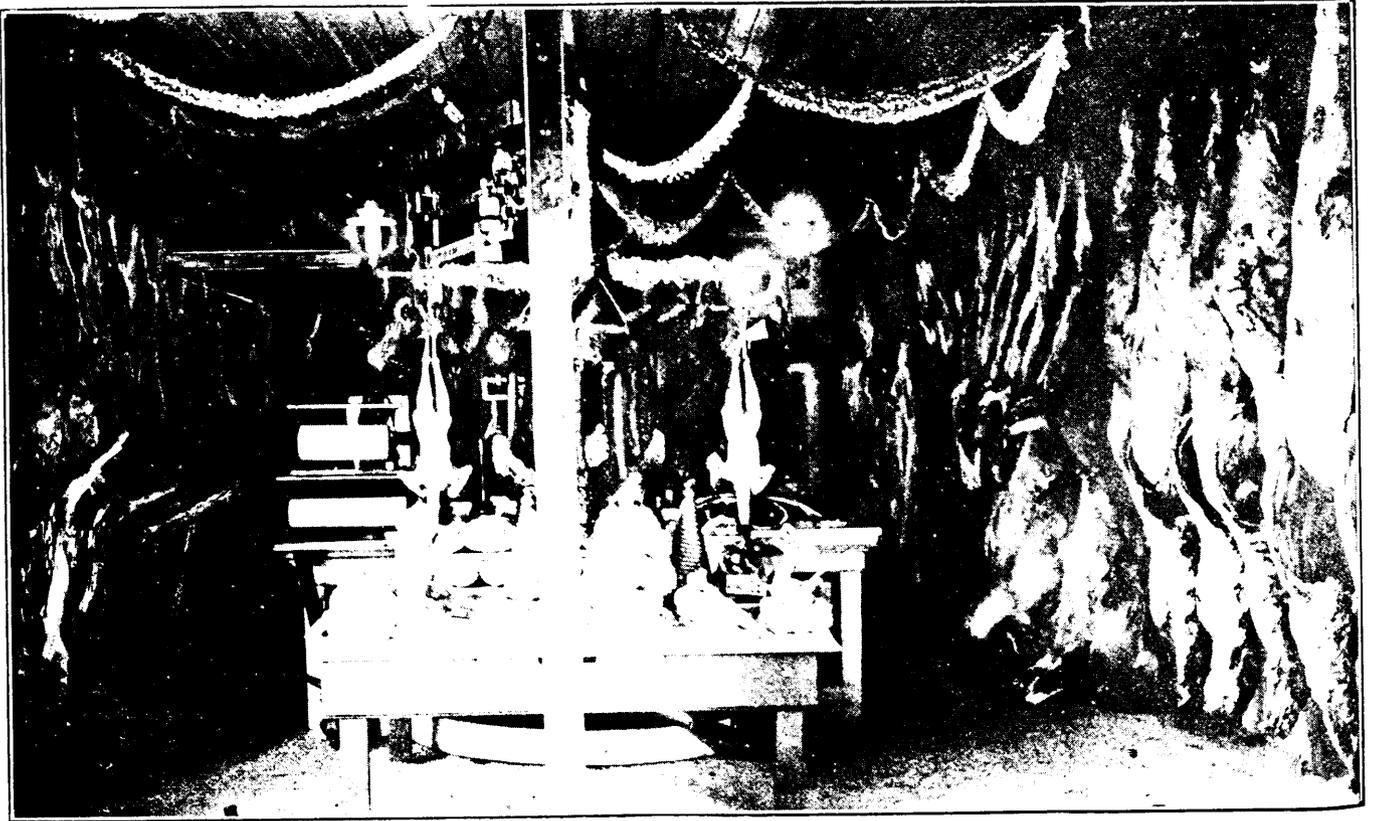
RESIDENCE OF JOSEPH BOOTH, ESQ., NANAIMO, B.C.



TUNNELING.



ORE DUMP.



BECKLEY & CO., NANAIMO, B.C.



MOUTH OF TUNNEL—QUARTZ MINE.

on James Bay and extends back to Humboldt Street, upon which, as the accompanying illustration shews, it has a considerable frontage. For the Yukon trade Mr. Pendray is manufacturing a special soap, packed in convenient packages, and a concentrated vinegar, for which there is already a large and increasing demand. "Pendray's" is a household name in British Columbia and promises to become as widely known as any of the names which are suggested by the thought of the important industry of soap manufacture.

WALTER S. FRASER & CO., SUCCESSORS TO MARVIN & TILTON.

The building of Walter S. Fraser & Co., situate at the corner of Wharf and Bastion Streets, represents the oldest wholesale and retail hardware house in the province of British Columbia, having been established in 1862 and carried on with great success until the present time. The business has now changed hands, having been purchased by Walter S. Fraser & Co., whose intention it is to put in a heavy stock of all descriptions of general hardware, iron, steel, bolts and mechanics' tools suitable to the trade. Special attention will be given to the requirements of the Klondyke trade and general mining outfits, and it will prove to the advantage of parties going to the gold fields to communicate with the firm before purchasing elsewhere, bearing in mind the important fact that goods bought in Victoria are exempt from duty.

THOMAS BROTHERS & GRANT.

One of the most important branches of the Yukon trade is that connected with the supply of the necessary warm and durable clothing required even by the hardiest of those who defy the rigor of that northern climate. Messrs. Thomas Brothers & Grant have made extensive arrangements to enable them to cater to this branch of the trade and are now in a position to supply all those who require the best cord and frieze suits cut in real "Klondyke" style made under the personal supervision of the principals of the firm, and combining strength with taste and durability. Fine customs tailoring and manufacturing for the wholesale trade are also specialties of this enterprising firm, and their stock of worsteds, serges, beavers, venetians, saxony, tweeds and cashmeres is as complete and well assorted as any of those to be found in any city on the Coast. Employing about forty hands and having invested a large capital in the business, Thomas Brothers & Grant have taken rank amongst the most important businesses in the city of Victoria, and the view given herewith of their establishment will convey a slight idea of the size and completeness of their business premises.

B. WILLIAMS & CO.

The retail clothing establishment of B. Williams & Co., of which Mr. W. T. Williams is the proprietor, is depicted upon another page, but no just conception of the volume of business done by the firm can be obtained from a view of the premises. Indeed, to such dimensions has the trade reached that Mr.

Williams has lately taken and now occupies the store adjoining the one shown in the illustration. Established in 1881, the firm now claim to carry the largest stock of clothing and furnishing goods in the province, their specialties being fur sleeping bags, fur coats and caps, heavy underwear, mitts and socks, leather coats, all kinds of blankets and Yukon outfits generally.

SAMUEL REID.

When, during the past summer, men attired in Mackinaw and corduroy suits were everywhere in evidence in Victoria, most of them bound for the Yukon gold fields, it was estimated that by far the largest majority who purchased their outfits here, had 'rigged themselves out' in their striking and serviceable costumes at Samuel Reid's, 122 Government Street, a fact which was due as much to the quality and price of the goods sold by Mr. Reid as to the central location occupied. This business, established in 1891, is regarded as a centre for the general outfitting trade and Mr. Reid's experience in this branch, extending over many years, enables him to guarantee entire satisfaction to his customers. Clothing, men's furnishings, hats, caps, trunks, valises, tents, sleighs, sleeping bags, furs and the many things required by the prospective and the returning Yukoner can be obtained here in every variety and at almost every price, and it is safe to say that during the rush of trade in 1898 Mr. Reid will receive a liberal share.

ERSKINE, WALL & CO.

Established in the early sixties, the business now so successfully conducted by Messrs. Erskine, Wall & Co., at the corner of Fort and Government Streets, has always been regarded as one of the best in the city. They carry one of the largest retail grocery stocks in the province and their large store and warehouses are ever filled to overflowing with everything usually to be found in grocery establishments of the highest class. Buying by the car-load and taking advantage of trade discounts, their retail prices compare favourably with those quoted even by some wholesalers, while in freshness and variety their stock is everything that can be desired. They also handle wines and spirits of all kinds, and when it is added that the business done by the firm reaches an annual total of \$150,000 sufficient has been said to prove the claim made by them that they are in a position to supply all who come with all they need, be they the humble artisan for his weekly supply of groceries, the wealthy capitalist desirous of loading his table with all the choicest delicacies known to the culinary art, or the prospective miner requiring a complete outfit for a two-years' sojourn in the inhospitable wilds of the Arctic region.

G. D. SCOTT.

Mr. G. D. Scott, whose photograph is inserted in this copy of the RECORD, is one of the best known and most successful mining operators in the province and has for the past nine years been identified with the growth of the mineral industry of British

Columbia. He is also Provincial Manager of the London and Lancashire Life Assurance Company, and has a good staff of sub-agents. He does a large commission business, selling developed and undeveloped mining properties, and looking after the interests of outside capitalists. About a year ago Mr. Scott established his present office at 42 Fort Street, Victoria, still retaining his interest in Vancouver, where he resided for nine years, and which are looked after by the firm of Mellon, Scott & Co., of that city.

Mr. Scott is largely interested in the Kootenay country—principally in the Lardeau and Slocan districts, being the owner of the Sunset group which is now being developed, and is also a firm believer and large investor in the mineral district of Alberni, being one of the heaviest stockholders in the Consolidated Alberni, and was a principal mover in the re-organization of the company which has resulted in the development of that valuable property.

Prominent Business Houses in Nanaimo.

NEW VANCOUVER COAL MINING AND LAND CO.

The premier position among the many industrial and business enterprises in Nanaimo must, beyond question, be allotted to the New Vancouver Coal Mining and Land Company, which furnishes employment to a very large proportion of the male population of the city. The largest producers of coal on the Pacific Coast, the enterprise of this company has done much to place Nanaimo in her present enviable position of commercial importance. One of the most pleasing and noteworthy circumstances in connection with the history of the company is the entire absence of anything like strained relations between the management and its employees, a fact which has been due in a very great measure to the admirable tact and generous dealing which are characteristic of the Superintendent of the company, Mr. S. M. Robins.

UNION BREWING CO.

The Union Brewing Company, established in 1891, when two or three smaller breweries were amalgamated, has the reputation of turning out the very best quality of beer and stout in the province; a fact which accounts for the large and increasing demand which exists, not only in the immediate vicinity of Nanaimo, but also in the other cities on the Island and on the Mainland for the company's product. Under the management of Mr. Henry Reifel, a brewer of life-long experience, the Union Brewing Company has attained a foremost position among similar British Columbia industries and the completeness of the plant, the admirable arrangement of the establishment and the quality of the products turned out bear ample evidence to the good judgment of the company in securing and retaining Mr. Reifel's services. Mr. W. E. Norris is the capable and efficient secretary of the company.

A. R. JOHNSTON & CO.

The firm of A. R. Johnston & Co. carry one of the largest and best stocks of general merchandise in the province and make a specialty of supplying everything needed by prospective voyageurs to the gold regions of the north. Groceries, provisions, hay, grain, feed and flour are among the specialties of this enterprising firm and they are also the wharfingers

of the city. As agents for the leading steamboat companies Messrs. A. R. Johnston & Co. have booked large numbers of passengers for the Yukon and their experience as outfitters places them in a position to furnish their patrons with all that is needed for the day, combining the maximum of quality with the minimum cost.

ANDREW HASLAM.

Haslam's Mill, one of the recognized industrial businesses of Nanaimo, takes rank among the largest lumber producers in the province. Mr. Haslam is a pioneer in British Columbia and has held many of the honourable positions in the gift of his fellow-citizens. An ex-member of the Dominion House of Commons, Mr. Haslam has by his enterprise and willingness to devote his best service to the interests of the public won for himself a high place in their esteem. The view in this issue of Mr. Haslam's beautiful residence will furnish an illustration of his enterprise as a citizen of no mean city.

NANAIMO STEAM CARRIAGE WORKS.

Fifteen years ago Mr. Ralph Craig laid the foundation of the business now carried on by his sons, Messrs. Thomas and Stanley Craig, who make a specialty of the manufacture of carriages, waggons, buggies, machinery, Yukon sleighs, picks, ice creepers, etc., etc. Occupying a floor space of 11,000 square feet the Nanaimo Steam Carriage Works are a perfect hive of industry, and at their branch establishment at Skagway the firm have found a means of accommodating the increased trade derived from the Yukon rush which their advantages and experience rendered inevitable.

NANAIMO "FREE PRESS."

No mention, however brief, of Nanaimo or its business establishments would be complete which did not include reference to the *Free Press*. Established April 15th, 1874, and in the natural course of events assuming the dignity of a daily edition December 5th, 1888, the *Free Press*, under the proprietorship and editorship of Mr. George Norris, has met with and overcome competition, sometimes of the most un-

scrupulous, and always of the strongest nature. To paraphrase the poet, however, "Men may come and men may go, but the *Free Press* would seem to go on for ever." The excellent telegraphic service furnished its readers accounts in a great measure for the even success enjoyed by the paper. A specialty is also made by the management of commercial and book printing; the staff employed numbers twenty persons, all artists in their particular lines, and the fact that throughout the many fluctuations of business inevitable in a period extending over nearly a quarter of a century the *Free Press* has retained its foremost position in the provincial journalistic field speaks volumes for the tact and ability possessed by its ruling genius.

WILSON HOUSE.

One of the best known, most complete and popular hostelrys in the province is the Wilson House of Nanaimo. Under the management of Mr. Geo. R. Raymond, the proprietor, the Wilson House has attained the position of being one of the best patronized family and commercial hotels in the Pacific Northwest, a fact which is due to the care taken in securing the comfort of its guests, and the excellent cuisine which is a specialty of the management. Occupying one of the best and most commanding locations in the city, the Wilson House, as will be seen by the illustrations presented herewith, has every appearance of being a complete and up-to-date hotel, a reputation which it needs only experience as a guest within its comfortable precincts to fully confirm.

STEVENSON & CO.

Established in 1892 this important dry goods business has grown by leaps and bounds, and now occupies two large stores on Commercial Street, where one of the largest stocks in the province of dry goods, millinery, men's clothing, boots and shoes, etc., is to be found. It is the claim of the principals that here and at their branch establishment at Revelstoke, the best value in these lines is given in the province, and the ever-increasing volume of business transacted would go to prove that this claim possesses more foundation in fact than is generally the case. Mr. C. E. Stevenson and Mr. J. E. F. Powers, the partners, are both enterprising and popular business men. They sell for cash only, at a small margin of profit, and the intending Yukoner will find his interests in reliable hands if he entrusts to Messrs. Stevenson & Co. the task of outfitting him for the journey.

H. N. W. DOBESON'S FOUNDRY.

Situated on the water front and enjoying the advantages incidental thereto, the foundry owned and conducted by Mr. H. N. W. Dobeson is in a peculiarly favourable position for the completion of heavy work in iron and steel manufactures generally required in a seaport and industrial town such as Nanaimo. Mr. Dobeson gives personal attention to the details of his large and ever-increasing business and a visit to the foundry with its multitudinous assortment of steam hammers, lathes, and other machinery will impress the visitor with a feeling of surprise that

where so much is being done in the fashioning of the finished articles from the raw material it should be possible for one man to have the thorough and exact knowledge of every detail in the many processes which is possessed by the proprietor and manager of this important industry.

E. PIMBURY & CO.

The large store of Messrs. E. Pimbury & Co, who have since 1875 conducted a wholesale and retail business as chemists, druggists, booksellers and stationers will impress the visitor to Nanaimo as being one of the most attractive business blocks in the city. The firm consists of Mr. E. Pimbury and Mr. E. C. Van Houten, and one of their specialties is the putting up of medicine cases which in compact form contain everything likely to be needed by those who intend to venture into the trying climate of the Yukon region. It is the constant aim of the firm to merit confidence for being trustworthy and to secure this object none but those competent to compound prescriptions are employed, and they have provided chemical apparatus and chemicals so that they may determine for themselves whether the drugs supplied to them are free from adulteration. Without these necessary precautions the skill of the doctor may become comparatively valueless and the chances of the patient's recovery circumscribed. They have a large stock of drugs, chemicals, druggists' sundries, patent medicines, perfumery, etc., on hand and are constantly adding all the new remedies as they become established. The book and stationery department is well supplied with newspapers, magazines and many of the most recent publications. The stationery is well assorted and up-to-date.

JOSEPH BOOTH.

One of the most charming residences in Nanaimo is that of Mr. Joseph Booth, of which an illustration is presented in this number. Mr. Booth has been a resident of the city since 1891 and is an extensive manufacturer of cigars. Carrying a large stock of raw material and employing only the most skillful workmen, Mr. Booth has obtained for the "Cuban Blossoms," of which he makes a specialty, a reputation for excellence which extends throughout the province.

TAYLOR, SMITH & CO.

Among the retail businesses of the city the general grocery one of Messrs. Taylor, Smith & Co. ranks among the most complete. Established in 1896, the firm have, by strict attention to the needs of their customers, to supply which they carry a well-assorted stock, built up for themselves a business which bids fair to become one of the largest in Nanaimo. Supplies needed by intending Yukoners are carefully packed by Messrs. Taylor, Smith & Co., and in farm produce, butter, eggs, fruits and all other lines expected in a first-class grocery store they will be found giving good value.

J. TAYLOR.

The retail hardware and notion store of Mr. J. Taylor will be found to be replete with everything

in the way of hardware, notions, etc., etc. Glassware, ammunition and the thousand and one things needed to make an ideally complete Yukon outfit can be purchased here at prices which will compare favourably with those charged by firms who make much greater pretensions. Mr. Taylor personally supervises every department of his rapidly increasing business and purchasers will find that he is willing and able to assist them in securing the best and most suitable goods for their purpose.

W. H. MORTON.

The view in this issue of the interior of the general hardware store of Mr. W. H. Morton, conveys a fair impression of the dimensions and variety of the stock carried. Mr. Morton, who is one of the aldermen of the city and well-known as an energetic and enterprising business man, purchased a few months ago the stock-in-trade, etc., of his present establishment from the estate of the J. H. Pleace Hardware Company and investing considerable capital in increasing the number and variety of lines carried has now one of the completest hardware stocks in the province. He also does a large manufacturing and repairing business, and in Yukon cooking stoves and camping utensils, will be found well up-to-date.

D. H. BECKLEY & CO.

To visit the store of Messrs. D. H. Beckley & Co., Nanaimo Meat Market, Victoria Crescent, and see the vast and varied assortment of fresh meats, game, poultry, sausages and bolognas of which an excellent and artistic display is always on hand, is to be convinced that attention to details and a determination to neglect no means likely to ensure success are characteristics of the firm. Six years' experience in their present location, during which time they have secured by far the largest share of the meat business of the city, has enabled Messrs. Beckley & Co. to successfully compete in the filling of large shipping orders, while in the hotel and general wholesale and retail trade they have distanced all rivals.

PRESENT PROSPECTS IN THE YUKON.

MANY of those into whose hands this special edition of the MINING RECORD may fall will ask what prospects there are for anyone going in in the spring. It is all very well, they will say, to tell what has been done and what sort of an outfit a man requires who is bent on going there, but what are his present chances for making what miners call "a stake" when he gets there?

While little has been said specially on this point in the foregoing pages, Inspector Ogilvie and Mr. Jones have answered the question inferentially, and in a way that will encourage the fondest hopes of those who are bent on seeking sudden fortune in the great gold fields. It is now too late to stake any claims about Klondyke. Hunker Creek, Gold Bottom and Last Chance Creeks as well as the creeks of the Indian River district, Dominion, Sulphur and Quartz, have already been thoroughly prospected and staked out; but there is still plenty of unoccupied land where gold will unquestionably be discovered in sufficient quantities to reward the adventurous souls who seek it. Not only does the prospect for placer mining seem practically limitless, but the outlook for quartz mining is particularly bright. Of course mining is

an uncertain calling. In its preliminary stages skill is not of so much account as luck. It would be idiotic to argue that all of those who seek the gold fields will return rich men. The fact is, rather, that many of those who go will fail, and it should not be forgotten that unless a man is physically able to stand the hardships of the difficult journey, it is much better for him to stay at home. But when all this is said, there is still the fact that this vast district is rich in placer deposits and there can be no reason for doubting that the discoveries already made are a mere prelude to what is to come. Inspector Ogilvie says: "We have in this province an area of from 550 to 600 miles in length and from 100 to 150 miles in width, over the whole of which rich prospects have been found. Stewart and Pelly Rivers in this gold-bearing zone, also give promising indications. Everywhere good pay has been found on the bars." The man who has made up his mind to take the chance and face the hardships will find in Mr. Ogilvie's assurance every encouragement to seek the favours of My Lady Fortune.

On the subject of quartz claims Mr. Ogilvie has this to say: "On Bear Creek a quartz claim was located last winter, and I drew up the papers for the owner. He had to swear that he found gold; he swore that he did, and he told me the amount, which, if true, will make it one of the most valuable properties that exists in the country. On Gold Bottom another claim has been located, and I made a test of the ore. The poorest result obtained was \$100 to the ton, while the richest was \$1,000." But while there may be an attempt at quartz mining later on, there is little doubt that there will be no persistent efforts in this direction until the cream of the placer deposits has been skimmed. The expense of living in this part of the world is so great, and the hardships and discomforts to be endured so great and so many, that placer mining will be abandoned as soon as the results cease to be of the nature that has marked them in the past.

The greater part of the vast Yukon territory is still unexplored. The man who seeks to explore it must face countless dangers and privations, but that the gold is there there is no manner of doubt.

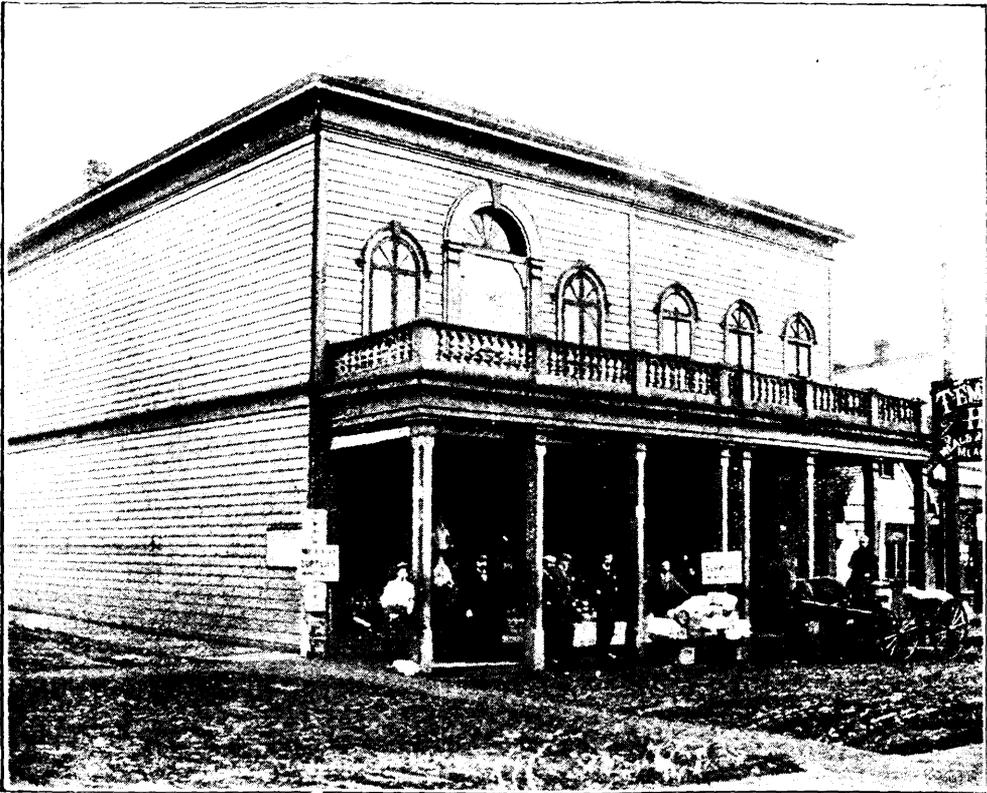
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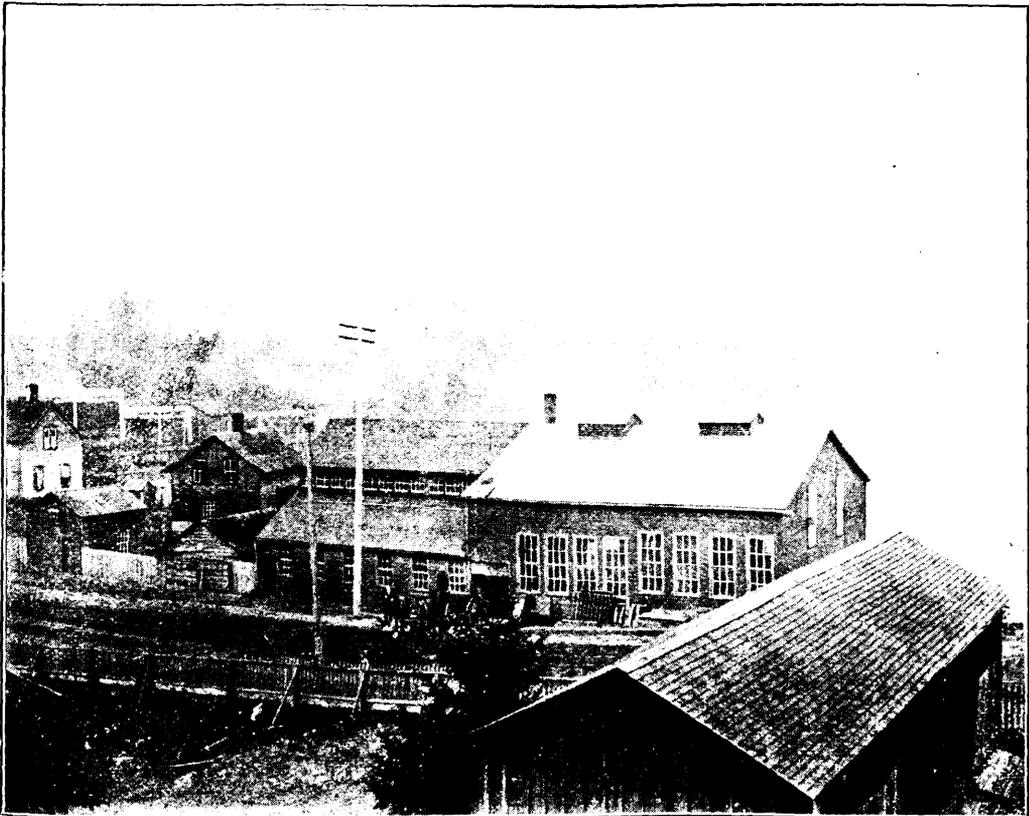
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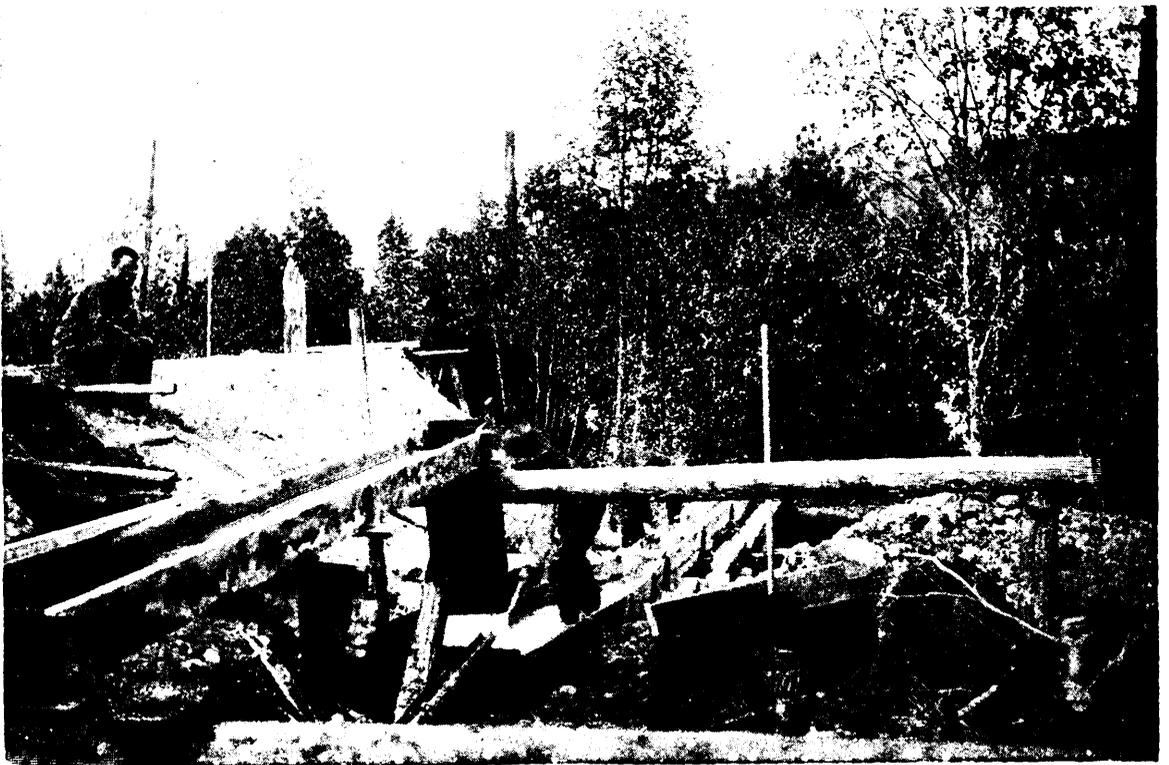
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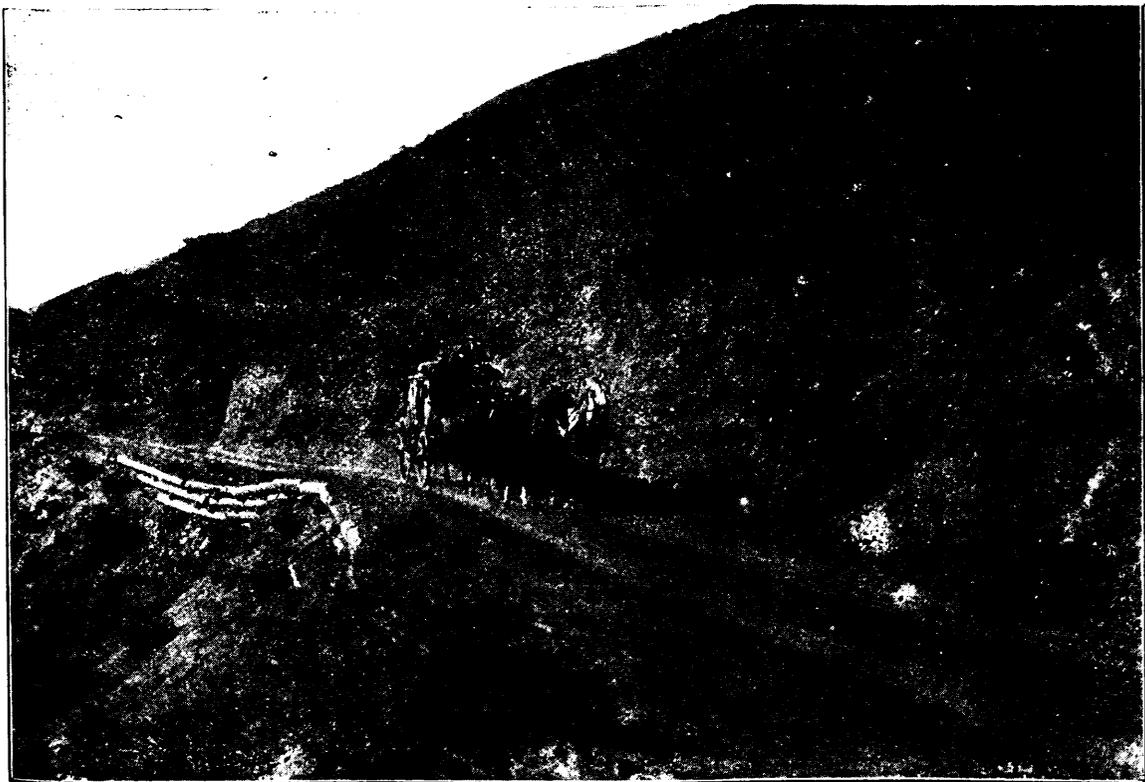
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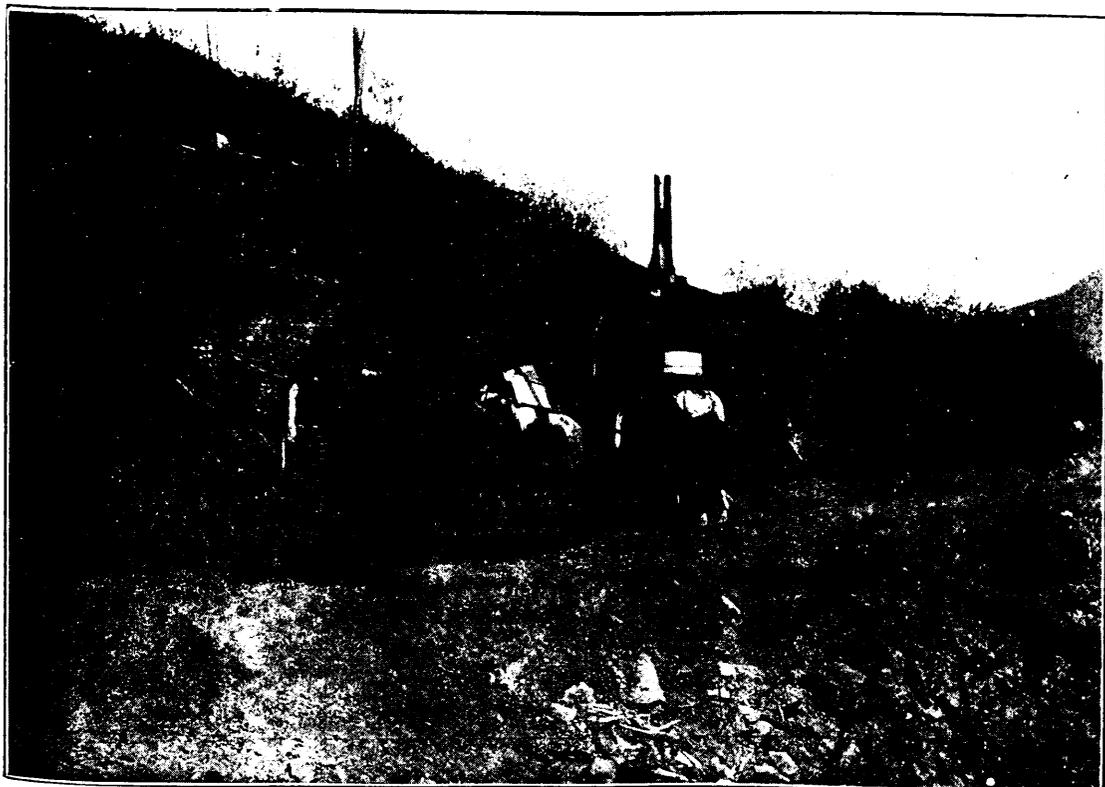
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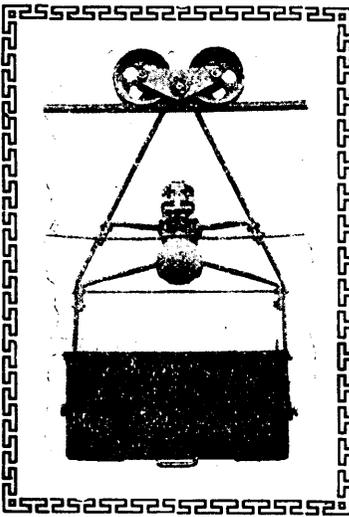
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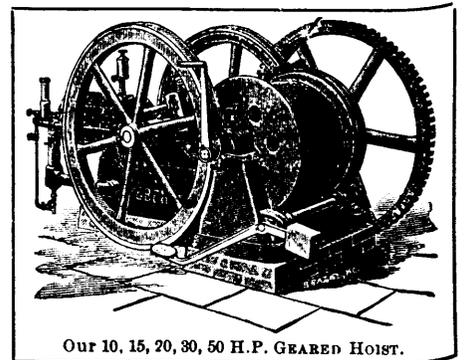
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