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BRITISH COLUMBIA MINING CRITIC

"I am Nothing, if Not Critical."—Shakespeare.

A Weekly Journal Devoted to Mining, Finance, and Commerce.

VOL. II. No. 17. VANCOUVER, B. C., SATURDAY, AUGUST 20, 1898. PRICE 5 CENTS

THE WILLIAM HAMILTON MANUFACTURING Co. LIMITED Engineers and Contractors

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TREASURY MINES

LIMITED

CAPITAL STOCK \$250,000; 1,000,000 SHARES OF 25 CENTS EACH.

LOCATION OF MINES:

Texada Island, B.C.

REGISTERED AND SECRETARY'S OFFICE:

319 CAMBIE STREET, VANCOUVER, B.C.

Properties owned by this Company, consist of:

Surprise Mine

Situate on Texada Island. Shaft sunk 340 feet, exposing six feet of ore. Assay value \$38.66 per ton. Steam hoist and equipment in operation.

Dude, Dundee, and Comox

mineral claims adjoining the "Surprise" Mine.

MR. W. A. CARLYLE, Provincial Mineralogist, in his annual report for the year ending December, 1897, speaks of this Company's property as follows:—

"If more claims could be developed with the same economy and earnestness shown here by the party of eight Comox men, progress in mining affairs in British Columbia would advance much more satisfactorily. Here, these men banding together their interests and all working, are proving up their property after the manner that has made some of the Western Mining States famous, or by the simple method of talking little and doing much.

"The Surprise, Dude, Dundee and Comox fractions, owned by F. H. Jell et al, Van Anda P.O. lie south-east of the Silver Tip, and on the Surprise a shaft equipped with a horse whim has been sunk 250 feet, along the line of fracturing that runs south-east by north-east and dips south-west at an angle of 61 to 71 degrees, in fine grained greenish feldspathic rock. Along this fissure the country rock is shattered and more or less impregnated with quartz, copper and iron pyrites, and sometimes galena and blende. In places for several feet it is barren, then will succeed a mineralized body, from which assays from \$4 to \$4 in gold, silver and copper have been obtained, one such body 18 inches wide, carrying, Mr. Jell states, \$30 in value. At the 64 and 200-ft levels short drifts run along the wall, showing some mineral, and at 250 feet a drift was in 12 feet."

10,000 Shares of the Capital Stock are offered to investors at par. Proceeds to be applied in payment of working expenses on the Surprise Mine.

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NOTICE.

All communications intended for THE EDITOR should be sent direct to

THE EDITORIAL OFFICES,
319 CAMBIE STREET,
VANCOUVER, B. C.

The British Columbia Mining Critic is published weekly in the interest of Mining, Finance and Commerce, and for the protection of investors.

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FRANK S. TAGGART,
Editor and Managing Director.

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EDITORIAL.

THE METAL MARKET.

The New York metal market has been "strong" in all quotations during the week. Copper has been steady at \$12, exchange price, but the indications are all toward higher figures. We would not be surprised to see the \$14 mark touched within a month. Copper is "king," without a doubt. Lead is going ahead famously, but the price is artificial, and while no serious decline is expected in the near future, a settlement to about \$3.50 is to be looked for. Silver has an upward trend, and will touch sixty in our next report. Following are the week's quotations:

AUGUST

	13th	15th	16th	17th	18th
SILVER—Exchange Price.	59½	59½	59½	59½	59½
LEAD—Exchange Price	4 10	4 10	4 10	4 10	4 10
LEAD—Broker's Price	3 85	3 85	3 80	3 85	3 90
COPPER—Exchange Price	12 00	12 00	12 00	12 00	12 00
COPPER—Broker's Price.	11 75	11 87½	11 87½	11 87½	11 87½

LOCAL STOCKS

The Mining Stock market, locally, has been exceedingly active during the past week. Nelson-

Poorman was by far the favorite, and some 226,000 shares turned hands. This stock has been closely watched for some time back by the knowing ones, as systematic development has been going on; so now that the property is showing up so well under careful development, they are finding a ready market for their stock. Two weeks ago these shares could have been picked up at 25c. to 30c., but today it is impossible to get anything under 50c. The prospects are exceedingly bright, and if the management decide on starting the stamp mill at once, there will be beyond a doubt, a big jump in the price of these shares within the next few weeks.

Slocan shares remain neglected; but not so with the Rossland stocks. There has been more demand locally for shares during the last two weeks, than there has been for over a year; Giant, Monte Cristo, Virginia, White Bear, Deer Park, Iron Mask and Cariboo (Camp KcKimmie) being the most sought after.

Our tabulated report will show the alterations since last week.

SILVER AND THE INDIAN MINTS.

The interesting despatch dating from Washington that appeared in the daily press recently to the effect that the Indian mints were shortly to be reopened to free coinage of silver, has been much discussed not alone by those interested in the production of the white metal, but by commercial people generally. It is upwards of a fortnight now since the despatch was first printed, and it is to be regretted that it yet remains unconfirmed. It is probable that it was a fabrication set afloat to influence silver stocks, for so far as can be seen, there is no greater reason why the mints of India should be opened to the free coinage of silver now than a year or two years ago. The statement contained in the despatch that the ratio was to be altered from 16 to 1, to 22 to 1, was doubtless inserted to give novelty to an old rumor revived. Before such

a change was made, in any case, it would be matter of public discussion for months before, and to say that the change had been decided on before the public was aware of it, was in itself sufficient evidence of the doubtful nature of the information. The ratio of 22 to 1 would make silver worth about 90 cents, and it can only be deplored that there is such little hope of that price being presently realized. It would add pretty near a half to the net value to the miner of all silver produced in the province.

THE TRAIL SMELTER.

This smelter now owned and operated by the Canadian Pacific Railway Company, is again in operation, having in its two copper furnaces a capacity of 350 tons a day, and between twenty and thirty thousand tons of ore is on land awaiting treatment, so that there will be a long and steady run. The power used is now wholly electric, which is expected to make a great saving, a part of which it is reasonable to expect will go to the miner.

The most interesting feature of the revival of operations at the Trail smelter, is the addition of a lead furnace with a capacity of 150 tons per day. This has not yet been completed, but it will be presently, and the intention then is, we understand, to offer its facilities as a custom smelter to the miners of the Slocan, and other silver-lead camps of the interior. These ores produce an average of at least 1000 lbs. of lead to the ton, the actual amount is likely a good deal more. Therefore if the furnace was run to its full capacity for 300 days in the year, it would produce in that period 22,500 tons of lead.

The question is, will a profitable market be found for that amount of lead in Canada? There is no question that Canada consumes that amount and more, in one form and another, but that is a different matter from saying that the Trail output will command the home market. The experiment is very interesting, and that it will give rise to the discussion of the lead question from the standpoint of a national industry is the most attractive feature of it.

KLONDIKE ADMINISTRATION.

Mr. Ogilvie will within a short time be back in the Klondike, and the public will look to him to make a searching investigation of the ugly charges that have been made during the past few months, against the government officials in the north. If these officials have been taking advantage of their

position to obtain benefits for themselves and their friends at the expense of the miners, they deserve the strongest condemnation, and should be discharged without the slightest hesitation. We are quite aware that it is easy to prefer charges, but a different matter to prove them. Happily Mr. Ogilvie is a man in whom the public has full confidence, and his report on this matter will be looked for with great interest, and when it is received will be regarded as final and conclusive.

THE PRICE OF LEAD.

Lead is selling at 4'12 in New York. The net price realized by the Canadian lead miner is 2'50 on his lead in ore and 1'50 on his lead in bullion. The reason of this difference is the duty imposed on lead going into the U.S. And still Canada every year imports many thousands of dollars' worth of lead, manufactured and unmanufactured, from the U.S. Surely it is within the wit of Canadian statesmen to prevent this spoliation of the Canadian lead miner.

NEWS NUGGETS.

Messrs. W. D. McPherson and Jno. W. Clark, barristers of Toronto, have issued a collection of the statutes of the Dominion and various provinces, under the title of "The Law of Mines in Canada." The volume contains 130 pages. It gives as well as the statutes, a compendium of the decisions of the courts, and a great deal of other very useful matter.

B. C. Mining Review (London, Eng.)—In the fullness of time no doubt a well-equipped or properly organised Bureau of Mines will be established in the City of London. But the provincial administration is slow to move, and precept and example alike appear to be thrown away upon the government. We have frequently asserted that the Agent-General's office is not sufficient for the growing needs of British Columbia in the United Kingdom. There is so much to be made known that it is impossible the work of educating the public can be left to private enterprise—interested promoters perchance. The colony of Victoria has thought it wise to establish a Bureau of Mining Information here; why cannot British Columbia do the same? We are sure the best possible results will follow, but to make it practicable and straightforward such an institution must be under the State.

Determination and Naming of Minerals.

The Editor of this Department will, without charge, examine and name, so far as possible, samples of minerals sent him; the answers being printed in the *MINING CRITIC*. He will only undertake to name average minerals, such as can be fairly determined at sight; and microscopic or chemical analyses will not be attempted; neither is it always possible to determine with absolute precision and certainty a small sample, or one decomposed and oxidized, and with such samples the sender must be content with the provisional determination that it APPEARS like such and such a mineral.

Questions involving an opinion on mining property, for which an expert would be entitled to a fee, will not be answered, but advice that will aid the prospector will be given.

The following conditions must be observed by those sending specimens for determination:

The specimens should be fresh and, where possible, about two inches square.

Each should be distinctly labeled.

The name and address of the sender, written very distinctly, must be enclosed in the package.

The package should be sent prepaid to the Editor B. C. *MINING CRITIC*, Vancouver, B. C.

A letter should accompany the specimens describing the locality, mode of occurrence of the rock and other facts, and rough sketches may accompany such descriptions.

Samples will not be returned unless by request, and where stamps are enclosed to cover postage or expressage.

Paid subscribers will receive an answer by letter to inquiries when so desired.

F. C. S.: Many chemists undoubtedly read the *CRITIC*. Possibly your question may interest some of them, so as we are unable to say "whether carbinium the metallic base of carbon has ever been isolated,?" our columns are open to any one who can answer this conundrum or who may desire to discuss the question.

Pitt Lake: The Samples are granitoid matter impregnated with copper sulphides. Send them to some good assayer to be assayed for copper, silver and gold.

Albarni: Your rock as sent may or may not contain gold in paying amounts. The green soft matter with the quartz is chlorite (pipestone), and is sometimes found to contain gold as at the Kookagami lake mines in Ontario, where the chlorite contains gold in pieces up to many grains weight.

Skookum Chuck: No, the ore mentioned in our issue of 6th August did not come from the Skookum Chuck mine.

What is it?: You do not comply with our rules as printed above, therefore are not entitled to description given herewith. The samples are a rock called granetyle and are nearly pure garnet, the remainder being quartz. We do not recall a case where this rock encloses a paying gold vein. It is common to the east of Harrison lake.

O. P. C., Ymir: Samples are always welcome. Those you send are fine specimens of a concentrating gold and silver ore, and if your vein is several feet wide you should be able to sell your claim. We advise you to do some stripping meantime.

Cyanide Poisoning: The journal of the Chemical and Metallurgical Society of South Africa re-

prints the following from a German exchange: "Practical experience has shown that peroxide of hydrogen may be considered a powerful antidote for cyanide poisoning. It has recently been applied successfully in 2½ to 3 per cent. solution, as subcutaneous injections, which were performed every four minutes at different parts of the body. At the same time the stomach was washed out with a 2 per cent. H₂O₂ solution.

"Peroxide of hydrogen forms with hydrocyanic acid oxamide, which is a harmless compound:

"2HCN+H₂O₂=2CONH₂=oxamide."

THE AGENT-GENERAL'S OFFICE.

EDITOR THE "CRITIC."—Sir,—Your references last week regarding the necessity of having some official in London, to inform enquirers of conditions in B.C. as regards mining, is timely. I speak as one who has experienced the drawbacks of the present arrangements. I came out from London six months ago, and previous to coming I applied at the Agent-General's office for information. But there was absolutely none to be had. I was treated courteously, but really the result of my enquiries was that I would have to go to B.C. to find out what I wanted to learn. I have come here, but had I had the knowledge I now possess, and which should have been given at any well-informed B.C. agency in London, it would have saved me a good many dollars. I cannot believe that the Government is aware of the totally useless nature of the London agency now maintained, or they long ago would have either mended or ended it.

GEO. T. ROOGE,

Vancouver, B.C., Aug. 16,

GOLDEN CACHE.

THE *CRITIC* is in receipt of intelligence that will be pleasing to the shareholders in the Golden Cache. The new stamp mill has now been running for some time and is giving the most perfect satisfaction. An abundant water power has been developed by the new dam on Cayoosh creek, and the air compressors are doing their work perfectly, supplying power for the mill and drills. The work is progressing on the most economical lines, and judging from the character of rock on which the stamps are now falling continuously, 24 hours in the day, the results should be such as to restore much of the faith in the property which existed before the previous test run. The public will watch with great interest the next wash-up, and confidence in its success is growing stronger at the mill every day.

From the Camps.

Contributions from any part of British Columbia and the mining districts of a reliable nature will be published in these columns, and we request that mining men write us about the progress of the mines of their district. We desire to publish all mining news.

SLOCAN.

On the Calumet and Heela at the head of Dayton creek a 29 foot ledge has been struck, with 12 feet of concentrating ore, assaying from 17 to 70 ounces of silver and \$2 to \$3 in gold.

The Emily Edith, back of Silverton, has become a steady shipper.

The compressor plant at the Noble Five, Cody, is now in full operation and working nicely. The air is operating three machines at the mine 6,100 feet away.

The Pilot Bay smelter, it is said will make another start. This time under the management of the British East Kootenay Syndicate, Limited of Cardiff, Wales.

The True Blue, on the mountain just above Kaslo, is, under development prosecuted by the Hall Mines Co., showing up well.

An even hundred men appear on the pay rolls at the Whitewater mine—this includes those employed on the mill. Heavy development on the mine is being pushed to good purpose. The mine looks well and will make big shipments this fall.

Messrs. Hicks and Barber, owners of the Transfer mine in Dayton Basin, have opened up a four foot ledge of ore, carrying galena, black sulphides and native silver.

No. 3 tunnel—or rather the stopes above it—in the Last Chance has what is said by those who have seen it, to be the finest showing in the camp. For about 200 feet there is an average of three feet of clean ore.

A strike of eighteen inches of clean ore was made recently on the Canadian group, in a tunnel driven through the Canadian ground by the Adams B. C. Company who are tunneling to tap their own ground. The Canadian group will continue to ship ore from now on.

Hugh Sutherland, made public the statement, in Slocan City, that he would have twenty men at work on the Evening Star before the end of the month.

FAIRVIEW, B. C.

Continuous and encouraging work is being prosecuted by the following companies: Smuggler Gold Mining and Milling Co., Ltd., Oro Fino Mines, Ltd., Winchester Gold Mines Co. Ltd. In each case the directorate considers their respective

properties warrant the immediate erection of a stamp mill. The first named has the foundation laid for their 20 stamp mill, and the other two companies are negotiating for smaller ones.

Prospectors returning from Twenty Mile creek, have brought in some excellent specimens of free milling and refractory ores, carrying good gold, silver and copper values.

YMIR.

The Golden Treasure, White Iron and Vesuvius claims, situated within half a mile of the Ymir mine, have been sold by J. Pyfe to an eastern Canadian syndicate. They have only been recently located and prospected. Assays right from the surface run from \$5 to \$13 principally gold. Some fine specimens of telluride rock, carrying high values, have been taken from the claims. Development work on the properties will be started almost immediately.

KAMLOOPS.

C. T. Cotterill, who recently bonded the Iron Mask, has gone to England to float a mining and smelting company to operate at Kamloops.

Sentinel: The Iron Mask lawsuit has been settled by the company paying the outstanding liabilities and all costs on both sides. This is pretty rough on Mr. Newman, who made the mine, under these circumstances, solely for the company's benefit, but the credit of a most successful operation is worth something, and that question belongs solely to Mr. Newman.

WINDERMERE.

The Mines Development Trust and Guarantee Co., of Rossland, have concluded the deal for the Swansea mine at Windermere, and the Delos mine on Horse Thief creek, with the extension thereon owned by T. Jones. Mr. Mullholland arrived last week from Rossland with a party to start work at once on both properties. Charles Parker, the consulting engineer of the company, recently, after a most exhaustive examination recommended the purchase of these properties. Samples he brought out went as high as 38 per cent. in copper, and the average of all the assays showed about 17 per cent. There are about 120 tons of ore on the dump, which will average 31 per cent. copper. The Mines Development Co. intend to bring out a subsidiary company to operate the Swansea and Delos.

COMMISSIONER OGILVIE'S OUTFIT.

Mr. Ogilvie who is now on his way to Dawson City, has equipped himself fully for the rigors of that extremely cold climate. In the place of blankets he and his party are taking eiderdown sleeping

bags and eiderdown quilts made of strong canvass on the outside and lined with a pure natural wool. By an ingenious device the down interlinings are arranged in such a way that when the bag is in use every seam is protected by a layer of down, either inside or outside, and therefore provides immunity from even the lowest temperature. The bag is waterproof and windproof and its weight is about that of two pairs of blankets. The bags and quilts are made by the Alaska Feather and Down Company, Limited, the well known makers of high class bedding and down goods in Montreal.

DEEP MINING.

On the theory that a good thing cannot last, merely because it is a good thing, the belief that deep mining is impossible in high grade districts has become quite general. It required years of practical experience to teach the world that copper mining could be carried on to undefined depths, and that proper appliances as to operating a mine were alone required to make such deep mining profitable. It is now generally conceded that the only restrictions placed on deep mining are the barriers which nature throws up to protect her treasures from the aggressive spirit of man. With the problem of expense in hoisting water and ore, in lowering timbers, supplies, machinery and men, properly solved, there is nothing to prevent the sinking of mines to an indefinite depth. It is rightly argued that liquid air will solve the heat problem as far down in the bowels of the earth as the ingenuity of man can penetrate. Of course, the ambition of the most aggressive mining man will scarcely go to such extreme length as to attempt to freeze the molten lava in the interior of the earth by pumping in the available supply of liquid air, in order to get at the reserve stock of minerals. But for all practical purposes the problem of deep mining has been solved.

With the possibility of deep mining comes a greater breadth of intelligence relative to inducements for deep mining. Scarcely had the world learned to believe that copper ore is of indefinite depth, than practical experience dissipated the delusion that gold mining is purely a surface proposition. There is really no reason for believing that gold and silver ores do not extend to a great depth, except that pinching ore chutes and barren zones have been construed as nature's definition of the end. This interpretation has unfortunately interfered with mining in many localities, even where comparatively little depth had been attained. It is often the case that in high grade mines a barren or very low grade zone is found three or four hundred feet below the surface. Sometimes this zone becomes so zinciferous and refractory that the ore is

scarcely worth hoisting. But below this zone the high grade ore is resumed and followed until at somewhat irregular intervals the zones reappear, the ore chutes as a rule being displaced thereby, yet practically continuous in character.—Western Mining World.

A SIGNIFICANT COMMENTARY.

From "Financial Times," (London, Eng., July 12th)—Another kind and good secretary has turned up with a circular sending to total strangers advance prospectuses and offering them special privileges. The concern for which he is acting is the Thompson Siding Copper and Gold Mines, Limited, and certainly the concern is putting on plenty of "side" for an enterprise that is only just beginning its business career. Its capital is £90,000, divided into 65,000 ordinary shares and 25,000 preference shares which are described as 10 per cent. cumulative. The secretary, Mr. M. R. Plunkett, announces in his circular that "The directors have reserved 10,000 preference shares for private issue, the subscribers under arrangement with the vendor syndicate to receive a bonus of 50 per cent. in fully paid ordinary shares of the company payable on allotment. This is a very transparent dodge on the part of the C. E. Exploration Syndicate, Limited, whatever that may be, to plant shares on guileless strangers. In the purchase price of £75,000 this syndicate as vendor takes all the 65,000 ordinary shares, so that the bonus thrown in as makeweight costs it nothing, and it is a significant commentary on the value of the 10 per cent. cumulative preference shares, that ground-bait is considered necessary to make the public bite.

THE LE ROI SUIT.

Senator George Turner and Colonel W. W. D. Turner have sued the British America Corporation and the Peyton faction of the Le Roi Company for \$780,000 damages, alleging conspiracy to depreciate the value of Le Roi stock. The complaint sets forth, says the Spokesman-Review, all the facts concerning the Le Roi deal from its earliest inception and tells of the wild flight of the trustees across the state to British Columbia to evade service of court. Conspiracy and fraud are charged against the Le Roi stockholders who want to sell their holdings to the B.A.C. and the big corporation and its officers are also charged with fraud in endeavoring to obtain control of the mine. The chief argument in the case, however, is that it is unlawful and contrary to public policy for a foreign corporation to buy the majority or the control of the stock of a domestic corporation.

HOOLEY ON THE STAND.

Detailed report of the disclosures made by Hooley in the Bankruptcy Court in London are at hand. Here is a sample extract:

Mr. Hooley: I am prepared to prove every one of them. Now, first with regard to the Earl of Winchilsea. The first introduction I had to him was in regard to the Cycle Manufacturers' Tube Company. He agreed that he should go on the board if everything was all right for £10,000, but he said he could not receive the money himself, and it should be paid over to his brother, the Hon. Harold Finch-Hatton, and I suggested that I should give him a cheque for £2,000, made out in blank, nominally in reference to some syndicate, and I received no consideration for it. There is the cheque (handed to the Official Receiver). It is filled up in the name of the Earl of Winchilsea. I did not know whose name was to be inserted in it, but it has been presented and cashed. I might also make another statement about the Earl of Winchilsea. During the time of the Cycle Manufacturers' Tube Mr. Lawson was bringing out the Great Horseless Carriage Company, and asked me if I could get the Earl on the board. I agreed to get him for £20,000, and I got £3,000 for getting him. I can prove that he received the £20,000. I don't want to say any more about the Earl of Winchilsea. (Laughter.)

Who's next?

The next one is Mr. Bayliss who has disclaimed, I gave him a cheque of £4,000 for himself and three other directors. The counterfoil is here written in by my secretary eighteen months ago. Another disclaimer is Sir Edward Sullivan, but he is not my Sir Edward Sullivan, who has not disclaimed at all. (Loud laughter.)

A Solicitor: Which Sir Edward Sullivan is it?

Mr. Brougham objected to the interruption, and pointed out that the address appeared on the prospectus.

The Solicitor: I appear for Sir Edward Sullivan, of Brighton, and it is important that it should be known that my client does not appear on these transactions.

Mr. Brougham: The address of the Sir E. Sullivan mentioned in the case is 32, Fitzwilliam-place, Dublin.

The Debtor: I paid Sir Edward £2,000 through a third party. Now, I come to Mr. Fredrick Gordon. He wrote to me the morning after my examination, and said he had written to the parers, would I say if it was all right or not. When I saw him I told him I had said that I had paid Mr. Macknochie £5,000 for the introduction. I let him down as carefully as I could at the last examination. I agreed that Mr. Gordon should receive £10,000 for joining the board of the Bovril Com-

pany, and that he should have £2,500 for getting Lord Duncannon to join the board. I paid the £12,500 in this way: I suggested payment in cash, but he would not receive it in that way, and I gave him 25,000 debentures in the Trafford Park Estates. Then came Mr. George Singer, the next disclaimer. I met a gentleman on the platform this morning who will come here and swear that Mr. Singer told him that he had received £15,000 from me. My books will prove it as well. He had £10,000 French Dunlops and £5,000 in cash.

As to Lord Warwick, I never said that he had a penny. What I said was that someone had £5,000, but that I did not know who it was for. Again, with regard to Lord Albemarle, I never said that he had anything. I have seen Earl de la Warr, and he says he only received 25,000 pounds stg. The moneys have been mixed up among the people, some being accounted for as commissions I cannot help it. They have had the money.

His Honor: You said on the former occasion that you had paid money to Lord Albemarle.

Mr. Bevfus: He admits having received 9,000 pounds stg.

Continuing the debtor said Messrs. Currie and Ross introduced Bovril to him, and he signed the preliminary contract with them. He gave 12,500 pounds stg. to Mr. Currie as commission, but before the contract came before the board, Mr. Lawson Johnston and Mr. Walker came to him, and said that unless he agreed to pay to them the amount he mentioned at the last examination, it would not pass the meeting of shareholders, because they would be present. He therefore agreed to pay Mr. Lawson Johnson, and his books could prove that the money was paid. That gentleman had treated him worse than he ever had been treated in his life. Next taking Mr. Harrison Davies, he could prove all he had said there, and he had got all the cheques back that were given. He would not make any statement about Mr. Beall, as that could rest until the cross-examination. (Laughter.)

Then as to Mr. Kirby?—We know his paper. I need not say anything about it. I only hope he has got enough. (Laughter.) He regarded Mr. Beall, Mr. Harrison Davis, and Mr. Kirby as the three worst blackmailers in London. (Applause, which was instantly checked.)

Mr. Clayton: I can give an absolute contradiction to what has been said about Mr. Beall.

Mr. Brougham (to debtor): Has anyone approached you offering you money or value to withdraw any statement made by you last Wednesday?

Mr. Bevfus objected, and asked if that was a question for the public examination.

His Honor ruled that the question must be answered under compulsion as it was very material.

Mr. Brougham: Who approached you?—Lord de la Warr.

Did he make you any offer in money?—Yes. He offered me 1,000 pounds stg. to contradict what I said last time if I would say the money was received not for joining the board but as a present to him after the company came out. I could name the gentleman now holding the money until this examination is over.

His Honor: That is a very scandalous thing.

Mr Brougham: Have any others approached you in this way?—Yes.

Who?—The Humber directors. Three of them offered me 1,000 pounds stg. and one offered 2,000 pounds stg. if I would say that the 56,000 pounds stg. they received had nothing to do with the Humber Company, but was for dealings in other business.

Who approached you? Must I answer the question?

The Registrar cautioned the debtor that he must speak the whole truth or the matter would tell against him in his application for a discharge.

Witness: I would rather have had a month in gaol than have had to answer these questions. As for my discharge, I do not want it.

Mr. Brougham: Who were the directors who approached you?—Mr. Rucker approached me for the lot.

His Honor: You stated that certain gentlemen offered you a bribe to commit perjury?—Yes.

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Registered 13th July. Capital £1,000, in £1 shares. Objects: To enter into an agreement with the Financial and General Syndicate, Limited, and to acquire, develop, turn to account, work and deal with any mines, land and rights.

BRITISH CANADIAN GOLDFIELDS OF THE KLONDIKE, LTD.

Registered 16th July by E. Andrew and White, 27 Clements Lane, E.C. Capital £275,000, in £1 shares. Objects: To adopt and carry into effect an agreement expressed to be made between the Yukon Pioneer Syndicate, Limited, and G. C. Saddington, as trustee on behalf of this company, for the acquisition of certain mineral properties in Canada, and to develop and work the same, and further to acquire any other mines, mining, water and other rights, grants, leases, claims, concessions, options of purchase, alluvial ground, mineral deposits, etc. in any part of the world; and to carry on the business of a mining, smelting and trading company, in all its branches; to acquire and turn to account any fishing and forestal rights; as provision dealers, shipowners carriers by land and sea, engineers and metal founders, printers and publishers, company promoters, bankers, financiers and concessionaires, etc.

THE ZYMEAN METALLURGY.

Dr. Selwyn, ex-chief of the Dominion Geological survey, and now a resident of Vancouver, is a brother of the well known Admiral Selwyn, R.N., who has recently added lustre to an already illustrious name by his discovery of the Zymeau Metallurgy. THE CRITIC had a pleasant talk the other day with Dr. Selwyn at the Chamber of Mines, of which institution the venerable geologist is president.

"Is it not somewhat singular," remarked THE CRITIC, "that your brother, a naval officer, should have had his attention directed toward the matter of reducing metallic ores, a thing so far removed from the duties of his position?"

"Perhaps it is," said Dr. Selwyn, "but not so much so, after all, when it is remembered that he has always had a liking for abstruse investigation. But undoubtedly the bent of his mind was always in the direction of mechanics, and in his knowledge in that subject he has perhaps few superiors. Some years ago he was employed by the Home Government in making extensive experiments in the use of liquid fuel in the navy."

"What progress is he making with the Zymeau metallurgy?"

"He is about to institute in London a school in which the process will be taught, but I have not heard what progress has been made. It is necessary that teaching should be given, except in cases of practical chemists, who understand the properties of the chemicals used. This school should turn out in a very short time numbers of people who will be qualified to go into the gold fields and make practical use of the process.

"The Zymeau Metallurgy," he continued, "will meet determined opposition to its practical introduction from the smelting men, assayers, etc.—all those who use the fire treatment of ores, because the new process will totally displace the huge smelting plants, and to a large extent the assayer as well, for it is so simple, so economical, and so thorough that the occupation of the assayer will be gone.

"The new process will be of especial advantage in a country like British Columbia, where the sulphide ores are spread over so great an area, and where they often occur of so low grade that the expensive method of reduction by smelting could not be profitably used. The cost is only a fraction of that of smelting, and the only charge made for the use of the process is a royalty of a few cents per ton, so low as to be quite inconsiderable."

In the course of a letter just received by Dr. Selwyn from his brother, the Admiral says:

"The best way to arrive at a fair understanding of it, (the Zymeau process) for those who know chlorination as formerly and even now practiced, is

to consider it as a more perfect chlorination without the expence of roasting, done in a few minutes instead of many hours, automatically instead of laboriously, resulting in perfect extraction and beneficiation of all the metals and metalloids contained in the ore, and above all the putting, at a minimum of expense, whether for plant or process, the whole of the profits into the hands of the mine owner. It will also solve the silver question, by enabling the miner to make more profit with silver at 27 pence per ounce than he did when it was worth 60 pence or five shillings per ounce. There never ought to have been a silver scare or a single mine shut down if in 1893 people had listened to me in Utah and California, instead of to the vested interests men. As to the cost, which, for 240 tons per day, I put at 20 cents per ton, and the Critic says 10 cents, it would be the latter if 480 tons per day were worked, which is quite within the capacity of the staff of workers, and takes very little more plant. The cost of this, ex mining and crushing, (with which the metallurgists have nothing to do), is less than that of one roasting furnace, and with a good mining carpenter, where wood is cheap, ought not to cost over \$1000."

Dr. Selwyn then produced a newspaper clipping which described the process. It differs in some slight manner from the description given in No. 9 of THE CRITIC, and will be read with interest.

J. W. Worsley writes the London Mining World that when in the United States he met with many auriferous lodes cropping out to the surface, chiefly of the sulphide class, but they were not valuable because the assays showed them to be under 1 oz. to the ton of 2000 lbs., and this was in a state where fuel and water were not over plentiful.

Within the last year my attention has been called to a process (patented), the principal agent in which is $S_2 Cl_2$, whereby all sulphide ores that contain metallic value can be both easily and cheaply treated, recovering all the metallic contents at one operation and almost at the one cost. Into an eight-ounce flask pour, say, 6 ounces of 25 per cent. solution of chloride of sodium and heat to 160° Fahrenheit, adding about 30 grains of sodium nitrate. Place in the flask, say, about one ounce of the sulphide ore to be treated, so finely powdered as to pass through a 30 or 40 mesh sieve, slightly shake so as to thoroughly mix. Now add about one teaspoonfull of sulphur dichloride (Cl_2) and note the effects produced. Sulphur dioxide, hydrochloric acid and chlorine will be evolved. Very gently stir, and when quiescent, which it will be in about 10 minutes, add another like quantity of $S_2 Cl_2$ and again note effect. In about 15 minutes a small sample may be taken out filtered for testing with the usual re-agents for Au.,

Ag., Cu., Pb., Statu., Zn., etc., when it will be seen how far the solution of these metals has been effected, and so determine whether further digestion is needed or otherwise. If satisfactory, the chemist will know how to proceed to precipitate the mettalic contents after he has skimmed off the sulphur, which by the way can all be recovered, refined and sold at a good price. This experiment if well done will give an idea of what the basis of the Zymean Metallurgy is like, and it may be tried on any sulphide ore, no matter how refractory, and all the valuable metals separated.

I have tried it on quite a number of ores with encouraging success, from one pound to as much as 5 cwt., and always, when practice has familiarized me with the ore, the treatment was as stated. With ores containing sulphide of zinc—the terror of the smelter—I find no trouble when submitted to the action of sulphide dichloride in the abode named meastruum. After separating the metals from the salt solution, it can be used again for dissolving.

The essential points in effecting a complete solution of sulphide ores by the Symean Metallurgy ore.

(1) Proper strength of the salt solution.

(2) Temperature not too high.

(3) The ore to be sufficiently fine.

(4) Due care in adding dilute hydrochloric acid when needed by alkaline ores, and stirring well after first introduction of $S_2 Cl_2$, which is easily and inexpensively obtained on the spot from the otherwise waste products of sulphur and hydrochloric acid gas.

But nothing but practice can teach perfection of manipulation in even a most simple metallurgical operation such as this.

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Shoal Bay, Rivers Inlet, Skeeda River, Fort Wrangel, Skagway and way ports--SS. Cutch sails on 5th and 19th of each month.

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Mining Stock Quotations

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COMPANY	NO. OF SHARES	PAR VALUE	PRICE
TRAIL CREEK			
Alecta.....	1,000,000	\$ 1.00	\$ 10
Big Three.....	2,500,000	1.00	10
Bute.....	1,000,000	1.00	01 1/2
Caledonia Con.....	1,000,000	1.00	05
Colonia.....	1,000,000	1.00	32
Commander.....	500,000	1.00	10 1/2
Deer Park.....	1,000,000	1.00	32 1/2
Enterprise.....	1,000,000	1.00	18
Eureka Consolidated.....	500,000	1.00	01 1/2
Evening Star.....	1,000,000	1.00	5 1/2
Georgia.....	1,000,000	1.00	12 1/2
Gertrude.....	500,000	1.00	06
Good Hope.....	500,000	1.00	02 1/2
Grand Prize.....	1,000,000	1.00	02 1/2
Great Western.....	1,000,000	1.00	09 1/2
Hattle Brown.....	1,000,000	1.00	03
High Ore.....	500,000	1.00	01
Iron Mask.....	500,000	1.00	1 00
Iron Coll.....	1,000,000	1.00	07
I.N.L.....	100,000	1.00	10
Josie.....	500,000	1.00	30
Josie Mae.....	500,000	1.00	37
Jumbo.....	500,000	5.00	30
La Bol.....	500,000	1.00	6 50
Libby May.....	2,000,000	1.00	19 1/2
Mayflower.....	1,000,000	1.00	08
Monita.....	1,000,000	1.00	14
Monte Crist.....	750,000	1.00	21
Morning Star.....	1,000,000	1.00	08
Mugwump.....	1,000,000	1.00	05
Nest Egg.....	1,000,000	1.00	01
Northern Belle.....	1,000,000	1.00	01 1/2
Noxety.....	1,000,000	1.00	03 1/2
Pala Alto.....	1,000,000	1.00	02
Phoenix.....	500,000	1.00	08
Powerman.....	500,000	1.00	13 1/2
Red Mountain View.....	500,000	1.00	03
Roseland Homestead.....	1,000,000	1.00	05
Rosland, Red M'N.....	1,000,000	1.00	21
Silverline.....	500,000	1.00	05
Silver Bell.....	500,000	1.00	02 1/2
St. Elmo.....	1,000,000	1.00	05
Virginia.....	500,000	1.00	1 02
War Eagle Con.....	500,000	1.00	2 25
West Le Roi Josie.....	2,000,000	1.00	25
White Bear.....	500,000	1.00	09
AINSWORTH, NELSON & SLOCAN			
American Boy.....	1,000,000	1.00	11
Arhobasca.....	1,000,000	1.00	32
Arlington Con.....	1,000,000	1.00	08
Burdee.....	1,000,000	1.00	51
Bardanelles.....	1,000,000	1.00	05 1/2
Belle.....	1,000,000	1.00	12
Elsie.....	750,000	1.00	12
Fern.....	1,000,000	1.00	25
Gibson.....	200,000	1.50	17
Good Enough.....	650,000	1.00	17 1/2
Hall Mines.....	800,000	1.00	1
Idler.....	399,000	1.00	12
London Hill.....	1,000,000	1.00	25
London Hill.....	600,000	1.00	15
Noble Mountain.....	1,250,000	1.00	18
Noble Five Con.....	1,200,000	1.00	01
Phoenix Consolidated.....	750,000	1.00	21
Rambler Con.....	1,000,000	1.00	21
Reco.....	1,000,000	1.00	1 25
Slocan Star.....	500,000	1.00	1 50
St. Katherine.....	1,000,000	1.00	03
Two Friends.....	240,000	1.00	15
Wonderful.....	1,000,000	1.00	04 1/2
Washington.....	1,000,000	1.00	15
Columbia-Cariboo.....	1,000,000	1.00	15
LARDEAU.			
Consolidated Sable Creek Mining Co.....	1,500,000	1.00	10
TEXADA ISLAND.			
Texada Proprietary.....	1,000,000	1.00	25
Treasury Minet.....	1,000,000	1.00	25
Van Anda.....	5,000,000	1.00	03 1/2
Victoria-Texada.....	150,000	1.00	05 1/2
Texada Kirk Lake.....	600,000	1.00	10
Raven.....	1,000,000	1.00	10
Gold Bar.....	100,000	1.00	10
ALBERNI DISTRICT.			
Alberni Mountain Rose.....	250,000	1.00	05 1/2
Consolidated Alberni.....	500,000	1.00	20
Mineral Creek.....	500,000	1.00	05 1/2
Mineral Hill.....	750,000	1.00	10
Quadra.....	500,000	1.00	10
CARIBOO.			
Cariboo Gold Fields, Ltd.....	£100,000	1.00	1
Horsely Hydraulic.....	500,000	1.00	1
Horsely Gold Mining Co.....	1,000,000	10.00	10.00
Slough Creek.....	500,000	1.00	50

COMPANY.	NO. OF SHARES	PAR VALUE.	PRICE
LILLOOET DISTRICT.			
Golden Cucke.....	500,000	1.00	40
Alpha Bell.....	500,000	1.00	31
Cayoush Creek Mines.....	500,000	1.00	50
Lillooet Gold Reefs.....	200,000	1.00	25
FAIRVIEW CAMP.			
The Horn.....	200,000	1.00	15
Winchester.....	250,000	1.00	17
BOUNDARY.			
Old Ironsides.....	1,000,000	1.00	22
Golden Crown.....	1,000,000	1.00	20
Boundary Creek M. & M. Co.....	1,500,000	1.00	55
CAMP MCKINNEY.			
Cariboo.....	800,000	1.00	78
MISCELLANEOUS.			
Cariboo Hydraulic Con.....	5,000,000	5.00	1.35
Channing.....	1,000,000	1.00	13
Occidental M. & M. Co.....	5,000,000	1.00	01 1/2
Smuggler.....	1,000,000	1.00	17
Five Mountain.....	1,000,000	1.00	30
B. C. Mining Prospectors' Ex., Ltd.....	250,000	1.00	25

DIVIDENDS.

Dividends paid to date are as follows: Le Roi, \$25,000; War Eagle (Old Company), \$217,500; War Eagle (New Company), \$30,000; Rambler-Cariboo, \$40,000; Reco, \$27,500; Slocan Star, \$40,000; Cariboo, \$25,000; Dominion Developing, \$158,158. The Hall Mines Limited, has also paid dividends on preferred and ordinary stock, amounting to \$10,000.

ESTIMATED PROFITS.

It is estimated that the profits of the mines subjoined have returned the sums placed opposite their respective names:

Payne.....	\$1,800,000	Goodenough.....	32,500
Idaho.....	220,000	Noble Five.....	50,000
Powerman.....	50,000	Northern Belle.....	20,000
Rath.....	200,000	Antoine.....	53,000
White-water (old compy).....	191,000	Surprise.....	20,000
Washington.....	20,000	Monitor.....	15,000
Slocan Roy.....	25,000	Last Chance.....	17,000
		Fern.....	10,000

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— TIME CARD —

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

Leave Kaslo for Nelson and way points, daily except Sundays, 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, 6:30 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.

G. ALEXANDER, General Manager.

COLUMBIA & WESTERN RAILWAY CO.

Time Table No. 6, to take effect July 3, 1897.

EASTBOUND.

No. 2 passenger (daily except Sunday)
Leaves Rossland 3:00 p.m.
Arrives at Trall 3:50 p.m.
No. 4 passenger (daily)
Leaves Rossland 11:00 a.m.
Arrives at Trall 12:00 a.m.
No. 6 passenger (daily except Sunday)
Leaves Rossland 7:00 a.m.
Arrives at Trall 7:50 a.m.

WESTBOUND.

No. 3 passenger (daily except Sunday)
Leaves Trall 8:15 a.m.
Arrives in Rossland 9:30 a.m.
No. 1 passenger (daily)
Leaves Trall 12:30 p.m.
Arrives in Rossland 1:30 p.m.
No. 5 passenger (daily except Sunday)
Leaves Trall 5:15 p.m.
Arrives in Rossland 7:00 p.m.

Connections made with all boats arriving and departing from Trall.

GENERAL OFFICES, TRAIL, B. C. E. P. GUTELIUS, Gen. Supt.

Kaslo & Slocan Railway

— TIME CARD —

Trains Run on Pacific Standard Time.

Going west	Daily	Going east
Lv 8:00 a.m.	Kaslo	Ar 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	" 1:45 "
" 10:15 "	McGulgan	" 1:30 "
" 10:28 "	Junction	" 1:12 "
Ar 10:50 "	Sandon	Lv 1:00 "

SANDON AND CODY.

Lv 11:00 a.m. Sandon Ar 11:45 a.m.
Ar 11:20 " " Cody Lv 11:25 a.m.

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REFERENCES:

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C. P. NAVIGATION CO., LTD**TIME TABLE NO. 32**

Takes effect January 4th, 1898.

VANCOUVER ROUTE.

VICTORIA TO VANCOUVER—Daily (except Monday) at 1 o'clock.

VANCOUVER TO VICTORIA—Daily (except Monday), at 13:15 o'clock, or on arrival of C. P. R. No. 1 train.

NEW WESTMINSTER ROUTE.

LEAVE VICTORIA FOR NEW WESTMINSTER, LADNER'S LANDING AND LULU ISLAND—Sunday at 23 o'clock; Wednesdays and Fridays at 7 o'clock. Sunday's steamer to New Westminster connects with C. P. R. train No. 2 going east Monday.

FOR PLUMPER PASS—Wednesdays and Fridays at 7 o'clock.

FOR MORESBY AND PENDER ISLANDS—Friday at 7 o'clock.

LEAVE NEW WESTMINSTER FOR VICTORIA—Monday at 13:15 o'clock; Thursday and Saturday at 7 o'clock.

FOR PLUMPER PASS—Thursday and Saturday at 7 o'clock.

FOR PENDER AND MORESBY ISLANDS—Thursday at 7 o'clock.

NORTHERN ROUTE.

Steamships of this Company will leave for Fort Simpson and intermediate ports, via Vancouver, the 1st and 15th of each month at 8 o'clock. And for Skidegate on the 1st of each month.

BARCLAY SOUND ROUTE.

Steamer Tees leaves Victoria for Alberni and Sound ports the 15th and 30th of each month.

KLONDIKE ROUTE.

Steamers leave weekly for Wrangel, Juneau, Dyea and Skagway.

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

JOHN IRVING, Manager.

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THE TREATMENT OF ARGENTIFEROUS ZINC-LEAD ORE.

It is well known that the presence of lead in Zinc Ores is very objectionable to Spelter Manufacturers, and that of Zinc in Lead Ores to Lead Smelters; Ores containing the two metals in large quantities have therefore been hitherto practically unsalable.

The Smelting Corporation, Limited, is now in possession of a patented process for the treatment of these Ores, and is willing to buy them or to grant the use of the process on terms to be arranged. The process is not profitable in all countries, owing to the expense either of fuel or of the necessary fluxes (Sulphate of Soda and Oxide of Iron). Where these difficulties are of weight, it will suit Mine Owners better to sell their Ores to the Corporation. The Ores best suited to the process are those containing a minimum of 20 per cent. of lead, 25 per cent. of zinc and 20 ozs. of silver to the ton, and a maximum of 51 per cent. of silica.

In addition to the Ores mentioned above, the Corporation's New Works are intended to treat

**ALL CLASSES OF GOLD, SILVER AND
LEAD ORES.**

The Corporation's Works at Ellesmere Port, on the Manchester Ship Canal, are provided with Automatic sampling arrangements, the only absolutely fair as well as the most expeditious system.

The presence of sellers' representatives is particularly desired, and every facility is offered them to satisfy themselves both as to sampling and weighing. The Corporation will quote prices to Mine Owners and Sellers of Ore on receipt of average samples or complete analyses.

FREDERIC S. BISHOP,
Secretary.

ASSAY DEPARTMENT

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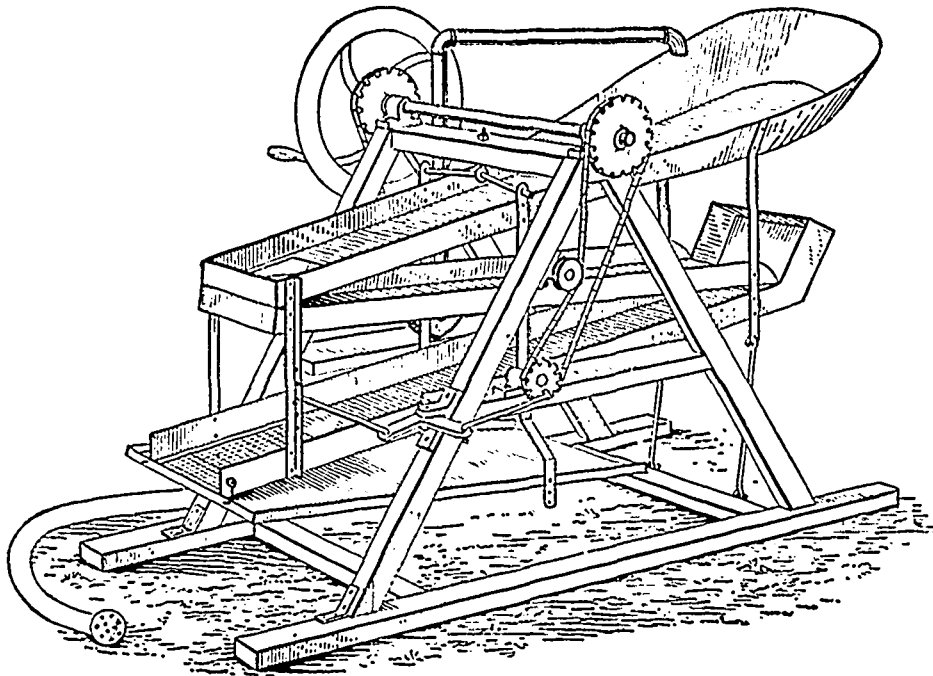
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A PRACTICAL PLACER MINING MACHINE.

No man or Company should leave for Klondike or any other Placer district, without first examining this machine and seeing its wonderful adaptation to the saving of mineral and labor which it is accomplishing every day where it is used.

THE KLONDIKE AND NORTHWESTERN MINING AND SUPPLY COMPANY claim that this machine is destined to revolutionize the whole system of Placer mining.

IT is particularly adapted to the saving of fine gold, and it is so constructed that the sand is thoroughly washed from the gravel without using the large volume of water required by the old sluice box method and, thereby, spreading the sand and gold over the amalgamating surface, with positive assurance that it will all be saved.

The machine has a capacity of 40 tons daily, thus enabling the working of any gravel which would be very low grade with the old-fashioned rocker, tom or grizzly. An experienced miner knows that gravel to be considered pay, does not depend entirely upon the ground values, but rather on the expense of handling tonnage, thus dirt paying say \$2.00 per day, rocking 1½ tons by old-fashioned methods, will pay handsome returns if, with the same labor in reduction, the miner handles 40 tons, or about 27 times the quantity equal to nearly \$54 per day.

The machine is easily transported to any point accessible by man or mule, and can be put in operation in a few minutes' time.

The power required to run one machine is one man. One horse will run several machines.

For simplicity, durability and economy it cannot be surpassed.

AFTER many years of study and investigation, we have succeeded in producing and placing before the public a high-grade washing, concentrating and amalgamating gold-saving machine, the method and operation of which has been conceded by expert engineers to be the most practical and economical of any gold-saving machine ever invented.

We claim that its superiority over all other machines consists in its adaption to be worked under the most unfavorable placer-mining conditions, and in possessing the following advantages, which no other machine can claim, viz:

The machine can be run by steam, horse or hand power.

Little water is required, one miner's inch being sufficient, and, if desired, the same water can be used over and over.

The machine pumps its own water from the stream, well or tank as required, it not being necessary to build ditches, flumes or make any permanent improvements.

**Price of Machine, Vancouver, \$250.
 Weight, 450 lbs.**

TERMS: One-third cash with order, balance draft with bill of lading.

NOTE: The above price covers the complete machine. Extra parts extra. The inspection of our machine in operation at our office solicited.

F. A. NEWTON

AGENT,

417 Hastings, St.,

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