

MARITIME MINING RECORD AND COAL AND METAL TRADES JOURNAL

Dr. R. Bell
Geol. survey dept.

Cumberland. * Pictou. * Cape Breton. * Inverness

New Series Vol. 8 No. 7

OCTOBER 11th. 1905

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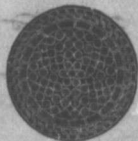
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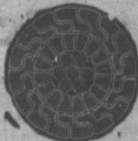
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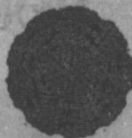
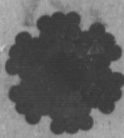
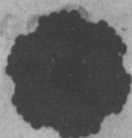
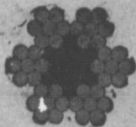
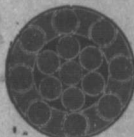
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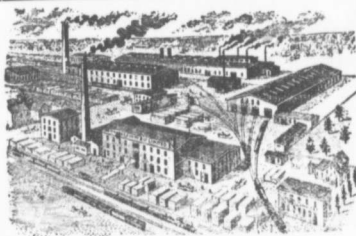
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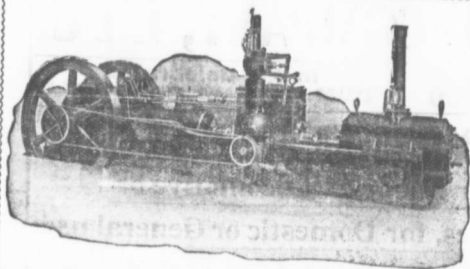
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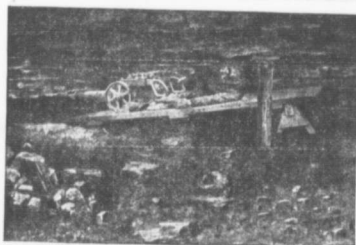
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The....
MARITIME MINING RECORD

Vol. 8, No. 7. Stellarton, N. S., October 11th, 1905 New Series

Selected Questions and Answers.

(From the Science and Art of Mining)

VENTILATION.

Q.—Will air diffuse with or dilute an accumulation of fire-damp quicker than an accumulation of black-damp? Give reasons for your answer.

A.—Yes, air will diffuse or dilute an accumulation of fire damp quicker than an accumulation of black-damp. The reasons for my answer are these:

Fire-damp has a low specific gravity. It is only half as heavy as air, and in attempting to remove it by dashing into it a stream of air it is just like mixing cork with water; so long as we keep the cork and water agitated we cannot see the cork, but as soon as we give up agitating the water the cork comes to the top. It is just the same when diluting fire damp with air. Fire-damp and air will mix together when in a confined space and the air is dashed into it, but should the air become stagnant then the fire damp comes to the top.

Black-damp has a higher specific gravity than fire-damp. It is half as heavy again as air, and in attempting to remove it by dashing into it a stream of air it is just like mixing sand and water together; so long as we keep the sand and water agitated the sand will not settle to the bottom, but as soon as we give up agitating the water the sand settles to the bottom. It is just the same when diluting black-damp with air. Black-damp and air will mix together when in a confined space, and the air is dashed into it, but as soon as the air becomes stagnant then the black-damp sinks to the bottom.

The reason why fire-damp can be diluted sooner than black-damp is because fire-damp is a light gas. Supposing that the air on a certain roadway of a mine travels at a certain velocity and that at a certain point in the roadway there is an accumulation of fire-damp. Now, the fire-damp and air will diffuse into each other, and the fire-damp will be carried away without reducing the velocity of the air current to any great extent. Instead of fire-damp we will assume an accumulation of black-damp. Now, the black-damp and air will diffuse into each other, and the black-damp will be carried away; but black-damp is half as heavy again as air, and three times the weight of fire-damp, therefore an accumulation of black-damp reduces the velocity of an air current considerably, while an accumulation of fire-damp does not to any great extent.

Q.—In the centre of a district reported clear at the morning inspection, a standing heading is discovered fouling in the middle of a shift. A "cap" can be detected 10 feet inbye from last stenton. What steps would you take?

A.—When a case of this kind occurs the first thing to do is to fence the place off, or if workmen were engaged in it, to withdraw them to a safe place in accordance with General Rule 7.

In this case the heading is said to be standing, therefore we suppose no one to be at work. The next thing to do is to ascertain the cause; and to see to its removal by increasing the power of the ventilation at this point. It is often caused by the wind becoming weak or the ventilation being deranged.

Perhaps a door has been left open or a brattice cloth broken down; there may be a fall of roof near the last stopping, thus breaking the brickwork, and allowing the wind to escape; the conducting brattice may be broken, or there may be a relaxation in the ventilation. If the wind is weak go back along the way it comes, and try to find out the cause of it being weak. Try to find out where it is leaking, examine all the stoppings, cloths, doors, etc.

When we have got back to a place where we have a good wind at command we bring it along, making the above mentioned things right as we come up to the last stenton. We have a good wind at this point, we will now assume, and we next proceed to carry this wind by means of brattice cloths into the heading. From the last stenton props must be set at convenient intervals, with either cloth set on the top or thin boards nailed on to the lids close to the roof, preferably cloth bars which are nine feet long and four inches square in thickness. These bars answer very well, and help to support the roof in between the props. The props would need to be 4' 6" apart, one under the middle and one where the ends join, a lid to be placed between the joint and the prop. The gas is said to be detected ten feet inbye, therefore we will erect one of these bars on a centre prop, taking care that the bar goes close up to the coal at the pillar corner. Now, we set a prop at this corner, and if any space is left on account of the uneven coal side—and there nearly always is—this should be made up with old cloth which should be stuffed in between the prop and the coal side, thus making it air-tight. Next commence to nail the cloth on to the bar by keeping a tight fold turned down at the top, and when you drive the nails in you have double thickness of cloth; by this method it is not broken down so easily. When it is nailed all right at the top, if the roof is uneven pack any holes left over the bar securely with old cloth.

Next proceed to see where the cloth touches the floor. The cloth here should be pressed on to the floor by stones, and covered with small dirt to prevent air escaping in this way, underneath between the cloth and the floor.

When this length has been completed another length is put up, and the cloth hung up as before, a prop being placed where the bars join with a lid over the top between prop and the joint of the bars, one prop thus answering the purpose of two. This process must be continued till the head end is reached, thus giving a proper separate intake and return.

By the method of setting timber in short lengths and putting the cloth up we drive the gas out as we go in, and thus avoid running into danger. Also the gas is

gently distributed into the atmosphere of the mine. This system will answer, no matter which way the wind is coming into the heading.

Of course, the space between the brattice and the coal side depends upon the width of the heading; it will allow, but never less than 1 foot.

If any holes are present in the roof where the gas still lurks scaling cloths should be erected. A cloth on a bar, same as previously mentioned, with a space over the top, so that the wind will pass over close to the roof and clear the hole.

In conclusion I may say that if this does not answer, a little more wind should be passed through the district, either by increasing the ventilation or regulating it from another district, but this is not often required at a well managed colliery.

HAULAGE.

Q.—Give a short description of the main rope system of haulage.

A.—The main rope or direct system of haulage can be successfully adopted underground where the fall from the shaft is 1 in 30 if the dip is uniform, but if the dip is not uniform no part of the road should have a less inclination than 1 in 28.

Only one rope, the "main rope," is used in this system, and it is coiled on a drum with a brake attached. A suitable engine for the amount of work it has to do is so situated that it can be thrown in or out of gear with the drum.

When a set or journey of tubs are coupled together, and ready to be run into the landing near the workings, the rope is attached to the last empty tub, and the tubs lowered over the bank head. When they run in-bye pulldown, and prevented from running again by applying the brake on the drum. When the set has got to its destination the rope is detached from the empty set, and attached to the first tub of the loaded set. The brake is also released from the drum, and the engine thrown into gear with the drum. After the necessary signal has been given the engine is started which revolves the drum, and so hauls the loaded set up to the bank-head or shaft level.

From the description given it will be seen that only a single road is necessary, and that the length of rope required is equal to the total length of the engine plane. The rope having the loaded tubs to pull uphill must be of the very best quality, and sufficient rollers must be provided to prevent any unnecessary wear or friction.

To prevent accidents from runaway tubs due to broken couplings the customary "trigger" or "bull" should be used behind the last loaded tub, and a bridle chain used for both loaded and empty set.

Any number of intermediate landings can be worked by the main rope system, provided the road is steep enough, that the points or switches are so arranged to guide the descending or empty train into the landing, and that the engineman can be signalled so that he may know which landing to stop at.

It is found very convenient to arrange the bank-head or shaft level so that, when the set reaches the bank head, the main rope can be automatically detached or knocked off, and the loaded set continue to run towards the shaft. The rope is thus left in a convenient position to be attached to the empty set.

BRAKES.

Q.—Describe a steam brake and a foot brake used in connection with the winding engine.

A.—Steam brake.—There are various kinds of steam brakes. Sometimes weights are used in conjunction with the steam either to apply the brake by weight, and relieve the pressure by steam, or to apply the pressure by steam, and relieve it by a dead weight; in other cases steam is applied direct to both apply and relieve the pressure upon the brake. The steam brake is very powerful, but its sudden action upon application to quick running machinery is very detrimental, and if constantly used during winding operations, the machinery, by being subjected to a large number of violent jerks each day, soon becomes very expensive to maintain in good working order; but, in my opinion, a winding engine should always have a steam brake attached to the drum powerful enough to hold with ease the load in any position in the shaft even if the drum should happen to work loose on the drum shaft. Such brake should be made to apply pressure by means of a short block placed near the bottom and at one side of the drum. The objection to circular or half circular straps is that they are cumbersome, and require a large amount of movement to free their action; the lever to be close to the engineman's hand—but the brake should only be used in case of emergency.

Foot Brake.—In addition to the steam brake there should also be a double-acting foot brake attached to each winding engine; this brake should also be powerful enough to hold the load in any position in the shaft. By double-acting brake I mean there should be a brake applied to the crank shaft, also one applied to the drum, both to work from the leverage, to prevent clashing of the spur wheels, and at the same time that the machine lever of the foot brake should be at the engineman's feet. The lever of the foot brake should be at the engineman's feet applied by catching into other teeth fixed into a plate for that purpose, thus relieving the engineman's foot from this duty.

THE TALLEST HOTEL IN THE WORLD.

There are some exceedingly high buildings in New York, but the tallest of them is to be dwarfed by one structure is to be built and used as an hotel. The huge is to be erected in West Thirty Second street, and will be called the Hotel Evida after the parents of two daughters Evelyn and Ida. The hotel will contain 735,000 sq. ft. of floor surface in its forty nine floors and will have accommodations for 2,200 guests. Five hundred of its single rooms will be equipped with baths, a plunge seventy-five feet long. A dining room on the top floor, with a roof garden above it, is also among the features of the new enterprise. Its room capacity will be one and a half times greater than that of the Ansonia the largest apartment house of the world.

In every suite of parlor, bedroom and bath there will be a refrigerating cabinet. All the beds will be of brass and the furniture will be of mahogany. By means of a system of pipes, ice water will be supplied to every room. The latest electrical appliances will be installed. A syndicate with a capital of \$5,000,000 has been organized and the work will proceed at once.

PROSPECTS IN INVERNESS.

The year has advanced sufficiently far to permit of the positive assertion that the coal shipments from Inverness county this year will be a great disappointment to those who hoped and looked for a steady increase from year to year. Of the coal trade of the province, as a whole, and of the mining counties of Cumberland, Pictou and Cape Breton it may be said it is subject to ups and downs, at least it has been so subject in some former periods, but of Inverness it was thought,—being new in the field and a young and thought to be sturdy competitor—and hoped that for a long time it would be free from similar periodical interruptions to steady progress. From figures so far secured it is evident that the output of the largest producing company in the county will fall far short of the shipments of 1904. Several causes may have contributed to this disappointing state of affairs. It is hinted that last year quantity rather than quality was sought after, with the inevitable consequences where the market is limited and the competition more or less keen. The appliances for effectively cleaning the coal were inadequate and deficient, therefore the product of the mine was marketed in a condition not to retain old or attract new customers. This year an additional picking table and screens have been erected, and a slope, from which surface coal chiefly was produced, shut down. The improved quality of the coal, due to improved appliances for cleaning it, must from this forward bring the coal more into favor and increase the demand. Some coals need much more attention on the surface than others, to make them thoroughly presentable, and Inverness mine coal seems to be one of these.

The Port Hood Company, or mine, will make a rather sorry showing this year. So far, perhaps chiefly from overmanagement the colliery has been by no means an unqualified success, indeed truth to tell it has been more or less, chiefly more,—a failure. The cost of production of the coal was much too high to permit of profit even with the enhanced selling price of the article. If coals costs a company as much to produce as they obtain for it, there cannot be anything but loss in the shape of fixed charges. And in the past it has been that way with this company. The management may have done their best, but circumstances were too strong for them. A supreme effort was made two years ago to lift the colliery out of its troubles by bringing a manager from the United States. The attempt was a failure, whether from unfamiliarity with existing conditions or from being hampered by former faulty systems or methods of work, it is not necessary to discuss. Absence of sufficient working capital and a very unsatisfactory arrangement with a company to dispose of the whole product of the mine, together with adverse balances from former years, combined to make last year a disastrous one, and to bring on a crisis, which culminated in the affairs of the company going into the hands a receiver.

The Eastern Trust Coy. is for the time administering the affairs of the company, and as an outcome it is hoped a reorganization may result which will place the mine in a position to give a good account of itself. Perhaps at no previous management. It was expected that Mabou might

time was the mine in so good shape for a satisfactory output at a cost far below that of any prior period, at a cost that should yield a fair profit at an average selling price of \$2.25 f. o. b. Though shipments have been small and the work fitful, development underground has proceeded satisfactorily. The mine is now in condition to give an output of 660 tons, not for a day now and again but for an unlimited number of days. There are sixty rooms, nearly all new, in which miners can be placed on short notice. Besides two new balances are being driven, and these with the levels, north and south, on two lifts will furnish fifteen more places, bringing the total number of working faces up to 75. For an output of 600 tons per day it is possible that the official staff could be cut down to half what was held necessary when the mine was producing only half what it is now good for, and this may be done without in the least impairing efficiency in any department. At the present time the mine is well ventilated, clean and tidy. The surface equipment likewise is well kept and in excellent repair. The company, or the Receiver, has in Mr. R. J. Bell an efficient, indefatigable manager, whose soul is in his work, and who has proven himself to be an adept at economical management. For his sake as well as that of the shareholders it is hoped that a speedy and satisfactory reorganization of the company may be effected. The manager of a mine suffers keenly, is sorely discomfited if not humiliated when circumstances arise which interfere with the operations of his company.

At Mabou work is all but suspended at present from reasons somewhat similar to those affecting Port Hood. At the present there is a shortage of working capital. As was said an issue or two back this is unfortunate as the development work has reached a most interesting stage. The explanation for the present condition of affairs is as follows: About a year ago overtures were made by a responsible American firm to purchase the property from the original company. Offers satisfactory were made to their stockholders and a contract entered into whereby the American firm was to have what is called in the United States a bond and lease on the property for the term of twelve months, the firm agreeing in lieu of payment of option money, to operate the mine and maintain the property in good order, and keeping all bills paid, during the term of their option. This they did up to the end of June last, when they entered into other large financial arrangements and engagements which evidently did not turn out satisfactory as the company finds itself at this time temporarily embarrassed. Sums of money upon which they had counted to carry on operations at Mabou failed to be available when wanted. This is the cause of the present financial stringency at the mines, and is placing the management in a rather embarrassing position as the old stockholders can do nothing until the option expires. The Record is of opinion that the workmen need have no fear of not being paid shortly in full. But the situation is an embarrassing one all the same for men and is a shipper to a small extent this year. That hope is dispelled, and so Inverness, when the figures of coal shipments for the year are made up, will be in no position to boast of a forward movement. That should come surely next year.

Maritime Mining Record

The MARITIME MINING RECORD is published the second and fourth Wednesday in each month.
The RECORD is devoted to the Mining—particularly Coal Mining—Industries of the Maritime Provinces.
Advertising rates, which are moderate, may be had on application.
Subscription \$1.00 a year. Single Copies 5 cents.

R. DRUMMOND, PUBLISHER.

STELLARTON N. S.

OCTOBER 11th. 1905

—AN EDITORS HOLIDAY.—

Leaving Stellarton at 7.40 a. m. one should reach Boston at 7.20 the following morning, but at that hour—the train having lost time, we found ourselves at a station 50 miles distant from the city. Having always been sympathisers with the cult who maintain that early morning air, and an empty stomach, are not conducive to equanimity, we decided to avail ourselves of the ten minutes—of our own time—kindly granted by the railway officials, therein to satisfy the cravings of the inner man. We went to breakfast,—and most of those who went wished, I am sure, they had'n't. The breakfast was not only hasty but heavy. It was unusual to have so large a crowd of guests, at that hour, and the short notice given, of their intended arrival, did not permit of due preparation for an elaborate meal. There were sandwiches, of course, and, also, of course, hot doughy rolls, and thoroughly boiled tea. In ten minutes time only, one might suppose that only a light breakfast could be partaken of; that is a mistake for indeed it was a heavy one, and lay like lead the greater part of the day. Getting to Boston at 9. we found that the train for New York started at 10 a. m., from the south, or union station. Our baggage was at the north. Going for a transfer we were told that our trunk might not get to the Central by 10 a. m., but we could present the Transfer Company's check, and get the railway's check to New York. This we did. The baggage followed us six hours later,—at least we presume it did, for we did not see it until after our arrival at our destination in New Jersey, two days later. On leaving New York we went to make transfer of the trunk from the Grand Union to the Lehigh Valley station. We paid a small fee for storage, gave up our check, and got another. Before leaving to cross the ferry we went to get trunk check-transfer check, and got a railway one in exchange. We were a trifle anxious as to the outcome, but fears were allayed by the trunk's arrival six hours after we had got to our destination. I write on this in order to speak a word of admiration for the splendid checking system in vogue in America. Had we been able to check right through there would not be much reason, perhaps, for admiration, or surprise, but before it got to its journey's end the trunk had been rechecked four times, the while its whereabouts, were uncertain, at least to the owners.

Though New York has its elevated, electric,

cable, and horse car roads, and, latest of all, its subway, the throng of pedestrians and carriages on the streets seems to be as great as ever. The dangers and difficulties at crossings have not been lessened by any diminution of vehicles, rather increased by the addition of Autos, to the list of regular conveyances. The automobile is in general use in New York. There are large ones for parties of twenty, and small ones for couples, or for singles. They are all the fad, at present, and unlike the bicycle, it looks as if they had come to stay. A majority of the big places of business are closed, on the afternoon of Saturdays, yet one can scarcely realize it from the busy condition of the streets. Were I asked to state, in a few words, what are the chief "sights" of New York I would at once reply, "The shop windows". It worries me and wearies me to have to trot, to satisfy a certain one, through one or other of the big departmental stores, but I can spend hours passing the windows without symptoms of fatigue, and, though of the genus homo, there is ample evidence that I am not singular in this respect.

On coming to a strange city the first thing necessary is to secure quarters in some hostelry. The difficulty is in making a selection. The hotel where we formerly put up having been destroyed, in the interests of growing commerce, or been removed, we had to seek new lodgings. On the way, on the train we had read in a Halifax paper of the Victoria hotel, finely situated, and so forth, ad. that rooms can be had from \$2.00 'up', should not bank on securing a room for \$2.50. The \$2.00 room is the exception, the 'up' the rule. At least that is my experience. Having booked we were asked what sort of room we wanted. Mindful of our lowly estate,—I am set down as belonging to the 'fourth',—the reply was, "a fair room." We were assigned Room with bath, No. 416, at \$1.00 per day. It should be remembered that in counting days fractions do not count. Ah, they count as wholes. There is no such thing as a day and a quarter or a half or three quarters. A day is a day and so also is a quarter, or a half or three quarters of a day. The cuisine was, so the ad. said, unexcelled. And so we found it. The prices could not, I am sure, be excelled in the Waldorf, or other of the swell hotels "up town". There were say 150 items on the bill of fare, and to pick up a small enough number to make a half decent meal, and keep within the \$2.00 a pieceable skirmishing, and not a little backing and fill-ducted on the European plan, in hotels like this, conducted on the European plan, with American prices, costs far more than twice as much as on an I. C. R. or C. P. R. dining car, and is not as good, beat even a Scotsman to live in an American hotel, conducted on the European plan and yet retain any claim to frugality. And then the waiters, countless and cravens all. If they bow it is not for nothing, it is for a tip. If one snatches your hat from your hand and hangs it on a peg, which you yourself could have done without great effort, it is ten cents. Then there is ten cents for the ice water boy, and the same for the boy on

the elevator, and for the cloak or umbrella stand man, and for a small army of others. They are all there on the look out for your comfort, nominally, in reality on the qui vive for the loose change in your pocket. It is a disgusting system. Of course one needn't tip, but if he doesn't he'll suffer for it in unthought of ways. I have heard Americans visiting Halifax refer to the quality of our hotels. I challenge one and all of them to name me a hotel in New York, Boston, Baltimore, Pittsburgh, or Chicago—I leave out Philadelphia—where one can be half as well served, at twice the money, as in Halifax or other of our Provincial large hotels.

On the train, after leaving St. John, N. B. I had a conversation with the pastor of the Presbyterian church St. Andrews, N. B. The church he presides over was built by a Scotsman, (a townsman of my own), eighty years ago. St. Andrews is a great summer resort. Among the annual visitors are Van Horne and Shaughnessey of the C. P. R. and their families. I think he told me Van Horne was a Unitarian, if a professor of any belief or creed, and Shaughnessey a Catholic, and yet Lady Van Horne and Lady Shaughnessey worshipped regularly in his church, and were liberal contributors. This is proof that, whatever may be said of the husbands, both ladies have common sense. That, however, by the way, I asked him if he was staying over Sunday in New York which minister he would go to hear, and added that I thought of hearing Dr. Hillis once again.—I had heard him in Chicago—but that was before he had won a high reputation. His reply was that Hillis was the one he also would go to hear if in New York. Thus it was that on Sunday morning we were found on the Brooklyn elevated among the crowds rushing for Coney Island. Plymouth church, where Dr. Hillis officiates, as many know is in Brooklyn. At first it looked as if we were going to have as much difficulty in finding Dr. Hillis' church in Brooklyn, as we had on a previous trip experienced in finding a certain Presbyterian church in Baltimore. Some of the Brooklyn train men had never heard of the man, or of his church. Here, literally, was a case of a prophet without honor in his own country. Spying a policeman we made for him, and were correctly directed. Arriving at the church door a boy stops us to hand a card. We took it at first to be an invitation to some service, but instead it was an announcement that full details of the service would be found in Monday's 'Brooklyn Eagle'. Here was enterprise. Was it to be commended? It did not strike one as being out of place. We were given a good front seat. The church is large, is well filled, females very largely in the majority. A very large number are strangers judged by the movements of the ushers. The pews are well supplied with bibles and Church Hymnaries, many of the latter with music. There is an organ in front of moderate power, and before it sits the choir numbering, say, twenty equally divided between the sexes. From the sheets handed each worshipper it is learned that the choir plays an important part in the services. Besides leading in the Hymns the choir rendered a couple of elaborate anthems, the first a Te Deum in B flat, and "O worship the Lord, etc." The

singing of the choir gave evidence of high culture, and that of the audience heartiness, which is infinitely preferable. Dr. Hillis is a medium sized, medium weight man, dark complexion, beardless, but with heavy moustache. In appearance inclined to be heavy rather than light, and graceful; manner quiet if not stolid; speech just a trifle thick until one grows familiar to its tones; his delivery calm; his language chaste, and his matter, ah, his matter, it is everything. One cannot help but follow him word by word. His text, in brief is, "For he could not be hid" and his subject "The inevitable Christ". Goodness cannot be hid. One song might establish the reputation of a poet; one speech stamp one as a politician, one bill entitle one to be called a reformer, and a single bold measure set the framer among statesmen, but one act does not constitute a good man. Goodness is not a thing of a day; it is a growth of years, perhaps. A remark that came in, incidentally, towards the close of the sermon struck more than one forcibly. Dr. Hillis said he had no doubt that friends who had left us, and gone before, were often as heart sick for us as we are for them. The Doctor may be right, but had I to say a similar thing there would be hesitation in saying it so decidedly.

By the way, I should not omit to tell that when making for the Brooklyn Bridge Ry. we heard a peal of bells, from the spire of one of the churches near the foot of Broadway, which, by one consent, the listeners affirmed were the sweetest chimes ever they heard. The tune which the bells pealed forth was 'Canons', so called in the Canadian Pres. Hymnal. It is set to the hymn, the last verse of which is "Praise God from whom all blessings flow." The tune is a simple long metre one, with nice harmony. The bells repeated the tune four times, and we could have wished the times to be forty. The tune and the words—they conjured up, old associates,—the clear sweet tones of the bells, and the simple beautiful blending of the parts, left a deeper and a truer impression than the singing of a score of elaborate anthems, from the lips of highly cultured choristers.

Unless for the closed shops one could scarcely believe that this was a sabbath morn, the morn of the day of rest. There is, it is true, less lorry and waggon, or truck, traffic, but the autos, big and small, the trolley cars, and the cabs seem to be doing as big a business as on working days, and there are as many people on the streets hurrying in all directions. The breathing spots—and there are many in the city,—greens and parks, are well patronized. In the park near the Battery there are thousands, coming and going, of well dressed, decent looking, people. Many coming to rest for a while and sniff the salt sea breezes, and than moving off again, in search of some fresh excitement. To a majority this cannot be a day of rest, so one is forced to conclude, but one of incessant excitement.

The steamers that ply to the bathing resorts, and those also that make half hourly trips round the harbor and the 'Statute of Liberty', are all well patronized. Pleasure yachts and all kinds of sailing craft are in evidence. The railways

are busy ferrying freight to and from the New Jersey side, and the tug boats are puffing as on ordinary days. The day is the sabbath but it is no day of rest to these vast crowds thronging the streets, the steamers, and the railroads. It is possible it may be to many a day of recreation, but to very many it is positively a day of the most feverish kind of worldly enjoyment.

If in the morning we heard a sermon, in the evening we heard singing, of a high class order, over high to some. This was in the Marble Collegiate Church, fifth avenue, which has a pastor and two assistant ministers, and is claimed to be the second wealthiest church in New York, due in great measure, if not wholly, to that unearned increment which Henry George denounced roundly, that is, its wealth is due to property left the church years ago, and which, though when bequeathed of no great value, has kept growing immensely in value with the growth and expansion of the city. There is but one main entrance to the church and here all comers on this occasion, are greeted with a hearty hand shake, by the minister, as was found out a little later, who was to officiate. The evening is wet, and the audience far from fills the spacious building. There may be 500 present. The discourse was good, but the singing, not the sermon was evidently meant to be the feature of the services. Whether there were two organs, one for the choir in front, and one for the congregation, behind, I cannot say for sure. If not then it was an organ induplicate, very large and exceedingly powerful. The choir was small, only four in all but professionals of standing and repute. The organ prelude is "At Evening" Then the choir gave the sentence "The Lord is in his holy temple", and shortly after that they sang a response. After the Lord's prayer there came a long anthem. "Arise shine for the light is come". After reading of the scriptures, a hymn to the tune "Eilers" to be found in the Pres. Hymnal in use in N. S. was sung in the heartiest imaginable manner. The organ and the choir were simply, to use a common phrase, "not in it". The minister had a splendid voice and coming well to the front of the platform took the leadership, and how that congregation sang was a wonder and a surprise, a wonder because one had been led to believe that it was not fashionable to sing above ones breath, and here in a church of the first rank was the very heartiest, the most enthusiastic kind of singing. This alone was worth ones while to come to church. If every preacher was a singer like this, my, would't the people awake from their studied silence. The people repeated the Apostles creed and then came a tenor solo "Abide with me". The voice of the singer was clear and pure, and of great compass—But, I have heard the tune played, with which the familiar words are associated, and I have with difficulty restrained a gulp; I have heard the words sweetly sung to the familiar tune, and moisture, I am not ashamed to say, came over my eyes, but, the singing of this solo, by this trained singer, evoked not the slightest emotion. Am I growing callous and flint hearted, or is this the kind of music that appeals not to the heart, but a kind that touches the head, the intellect only. The second hymn was to the beautiful tune "St. Agnes". As an offertory the

choir, unaccompanied, rendered the anthem "Angel bands etc." And besides there was a second solo from the basso. The anthems and the solos were no doubt wonderful, but if you put me on the rack I would not say they were worship. It may be that I am yet uncivilized, in part. The subject of the discourse was, "Is life worth living". Was there levity in the preachers opening remark in answer to his own question:—"It all depends upon the 'liver'". Did he emphasize the word?

A well informed correspondent calls the Record's attention to the following article from the Morning Chronicle. Needless to say the Record endorses heartily all that our Halifax contemporary says. We want no walking delegates with swelled heads stulking here and there ordering strikes on and off. These so called Canadian Unions formed after American models are far more hurtful than beneficial to Canadian workmen. Our correspondent adds that the article with a few changes could be made to apply to the Canadian Mining Institute, with its gall and pre-umption, its official organ and its government grant of 3000 a year. The Mining Society of Nova Scotia like the P. W. A. is a staunchly Canadian institution and deals with many of the most important mines in the Dominion, and has at least an equal right with the Can. Mining Society to be considered national and to have a grant from the government. And the MARITIME MINING RECORD is its prophet—to use the words of our correspondent,—giving praise, blame or criticism according to its deserts, and giving the government appropriate hints as to what its policy should be:—

"An impudent attack on the Provincial Workmen's Association of Nova Scotia was made at Toronto on Friday by one P. M. Draper, secretary of what is called "Congress of Trades and Labor Unions of Canada," which, in spite of its name, is far from being representative of the workmen of the Dominion. It is quite customary for a handful of men in Toronto and Montreal to get together and form an organization which they style "Canadian" and which the rest of Canada is asked to recognize as the national body in sport, labor or what not. The P. W. A. has wisely held aloof from this so-called "Canadian" union and by so doing has incurred the displeasure of Secretary Draper, who has the hardihood to declare that the Provincial Workmen's Association is "the worst menace to international unionism" and that "the organization was used and admittedly existed as a political organization."

Such allegations are hardly worthy of reply. No defence of the P. W. A. is needed. Its record speaks for itself. It has been a powerful agency in bettering the condition of the coal miners and other workers of this Province and it has gained the confidence of the public because its leaders have been men of prudence and breadth of view and its members men of intelligence and patriotism, who rightly think that the workmen of Nova Scotia are quite capable of looking after their own affairs, without the assistance of Mr. Draper, or his "Canadian" Congress, or even his "international" allies.

The P. W. A. is a staunchly Canadian organization. It has prospered without tagging after Yankee agitators, and if Mr. Draper would imbibes some of the sound patriotism of the P. W. A. and turn his attention to the organization of thoroughly Canadian unions, he would be doing something of real value for the cause which he professes to serve. As to the allegation that the P. W. A. exists only as a political organization, it does not deserve serious comment.

WISE ONTARIO.

To every patriotic Nova Scotian, especially those interested in the right and energetic development of the wondrous mineral resources of the province, it must be a source of surprise if not of humiliation that a country less favored than our own, so far as minerals of commercial value and in common use are concerned, should be continually setting us examples of how rationally and energetically the development of minerals may be fostered and encouraged, and also safeguarded. The country we refer to is Ontario. Many times has the Record commended the course of the government of that province in this respect. And again have we to call attention to a wise resolution of its government to frame legislation affecting the mining industry. Unlike some governments, that of Ontario is not of the opinion that the last word has been said on mining legislation, nor is it of the opinion that of itself it knows how to frame legislation, enact laws that will be best in the interests of the industry. Nay, rather, it is wise in knowing the limits of its knowledge, and in making confession thereof. The government of Ontario has resolved on a revision of the mining laws to be submitted at the next session of the legislature. This decision has been reached by the Government after a consideration of the existing regulations and of suggestions which have been made from time to time. In order to give an opportunity to mining men generally throughout the Province to express their opinions as to what changes, if any, should be made, the Department of Lands and Mines is asking them to hold meetings at which there can be free discussion of the whole matter from the point of view of the several interests engaged in mining and prospecting. They are asked to place themselves on record as to what amendments should be effected, if they are not satisfied with the regulations as at present in force. These meetings will be held at Kingston, Madoc, Haileybury, Sudbury, Sault Ste. Marie, Port Arthur, Kenora and Fort Frances.

It is suggested further that delegates be appointed to attend a general meeting to be held in Toronto about the end of November, at which the suggestions sent from the local gatherings can be discussed by the whole body. The Government hope in this way to obtain the opinions of the working miners, mine owners, prospectors and all who are in any way interested in mining matters. There is no doubt that these expressions of opinion will have weight with the Government in framing the new regulations and with the Legislature when it comes to discuss the mining laws at the coming session. It is a reflection on Nova Scotia that a country whose mining industry is not of primary importance should show more zeal in the industry than is shown in Nova Scotia where this industry ranks first. We need to be 'enthused.'

RECEIPTS OF COAL AT MONTREAL DURING SEPT

	1904	1905
N. S. Steel & Coal Co.	14 504	12 332
Dominion Coal Coy.	115 249	116 775
Port Hastings.	9 348	2 902
Port Morien.	1 262	1 300
Intercolonial Coal Co.	2 848
Acadia Coal Co.	2 185	3 062
Scotch and English.	2 149	1 043
American, by sea.	2 699
	150 244	137 504

A REMARKABLE SHAFT.

ARTICLES THROWN INTO IT DO NOT REACH THE BOTTOM.

It is an interesting scientific fact, and one not generally known, that nothing which falls into the mouth of the deepest mining shaft in the world ever reaches the bottom. This has been demonstrated at the famous Red Jacket shaft of the big Calumet L. Heckla copper mine at Calumet, Michigan. The article, no matter what shape or size it may be, is invariably found clinging to the east side of the shaft.

One day a monkey wrench was dropped, but it did not get to the bottom. It was found lodged against the east side of the shaft several hundred feet down.

This incident coming to the attention of the Michigan college of Mines, it was decided to make a careful test of the apparent phenomenon. It was decided best to use a small but heavy spherical body, and a marble, tied to a thread, was suspended about twelve feet below the mouth of the shaft. When the marble was absolutely still, assuring that it would drop straight down, the thread was burned through by the flame of a candle. The marble fell, but at a point of about 500 feet from the surface brought up against the east wall of the shaft.

The same would be the case were a man to fall into the shaft. While it would mean sure death, the body, badly torn, would be found lodged in the timbering on the east side.

Members of the faculty of the College of Mines are now engaged in experiments with a view to developing data as to the thickness of the earth's crust. It is not hoped to solve the perplexing problem of the distribution of the earth's matter, but it is hoped to add to the information collected concerning it. To this end the Red Jacket shaft presents advantages possessed by no other place in the universe. The deep shafts in other parts of the country and in foreign lands generally begin at an altitude and end above or but very little below the sea level, whereas at the Calumet mine the Red Jacket shaft starts in at a comparatively low altitude and pierces the earth's crust deeper and further below the ocean level than any other in existence. It is hoped within a year to be able to give some intelligent information regarding the investigations.

In lieu of a report of its own the Record gives the following from the Eastern Chronicle. We endorse the sentiments:

"The school in connection with Dalhousie College inaugurated in Stellarton by a public meeting on last Friday evening should mean a great deal to ambitious young men in the community of towns of which Stellarton is the centre. As it appears to us that a young man who takes advantage of the tuition there to be given should be fairly on his feet for a short term in college in order to get a college diploma. This point should be made clear.

We believe, too, that as the local government get a large revenue from coal mines they should offer a number of scholarships to graduates of these Dalhousie schools and, also, to graduates of the mining schools. We cannot tell what form these should take, but that could be easily worked out.

We have the highest hopes of the result of this new school and we hope a number of our young men in New Glasgow will take advantage of it."

AROUND THE COLLIERIES.

Prospects of good times for Springhill are ahead if the men and management agree to enjoy them together.

Stokers may be a help to firemen, there is one feature, however, that is very prominent; they give the fireman a hot time when cleaning the fires.

A walk of two miles straight ahead is common to many Springhill miners. Never before was there such a field of coal opened out as at present in the Springhill mines.

A new conveyer will soon carry the coal to the chutes at the house coal bins at the west slope Springhill. The chutes are completed and work on the elevator is progressing.

One always imagined that certain parts of C. Breton, such as Judique, grew the largest men in the world. . . . But after hearing a certain coal Inspector tell of the men of his county, put it down to imagination, and give the palm to Limerick.

There are 15 boxes on a rake on the north slope Springhill. These are drawn at the rate of 1000 ft. per min. To see 15 boxes mount the brow of a steep slope at such rate of speed, one naturally thinks of powerful engines and strong ropes.

Both old and young of Springhill are close readers of the feats of Springhill horses. Lady Bingen was the subject of discussion lately, when one and all gaelic Highlanders enthusiastically declared, that Lady Bingen broke the record by a quarter of an hour.

The night school is to open at once in Springhill. There is wisdom in this step as it will fit intending mining students to take up their special lessons in the night school without having to be grounded in the preparatory work at the mining school. The mining school has proven two things 1st. that a night school for general education is most necessary, 2nd. that the mining school has a place that cannot be filled by any other institution, call it by whatever name you please.

During the recent strike the officials of the Cumberland Railway and Coal Co. had to take upon themselves the task of keeping up steam on the plant for the purpose of keeping the pumps and fans going, and working the hoisting engines. All turned to the work like men, and, on the 2nd. day at least, kept up steam as easily and proficiently as the regular hands. It has always been doubted that the official staff could perform this work in anything like decent shape, but this strike has demonstrated the fact that the Springhill officials can keep their heads above water even when the pumpmen quit their posts. This is a factor which ought to be considered in case of future friction.

The shipments to Montreal of the N. S. S. & Coal Co. fell off a little during Sept., due in large part to the big demand for the coal locally.

The shipments of the most of the collieries, for Sept. show a gratifying, though by no means startling, increase over the shipments of Sept. of last year.

It will be noticed in another page that a call is made for miners at Norton N. B. This coal mine we believe is worked, under a commission, for the New Brunswick government.

If as stated the Dominion Coal Coy. have already commenced to bank coal at the station at No 2. If this be so it is evidence that the company mean to be prepared for any opportunity which may be furnished by a strike of U. S. miners next spring.

The workmen at Broughton colliery presented an address accompanied by something more substantial to Mr. Rob. D. Anderson on his retirement from the position of manager at Broughton. Evidently "Bob" did not think there was room there at present for expansion.

Some men are very uncharitable. On the cars the other day one man was overheard to remark to a companion, "You see its this way, John Mitchell lost all his money by a bank failure lately, and he is agitating a strike as a means of in some way recouping himself." Ah, well, why should not the Pres. of a Labor society look out for No. 1 as well as that of an Insurance Coy.

Springhill town is continually growing. It has many streets running out over Herritt's hill where formerly the Herritt road was the only street. No less than two coal inspectors hover around Springhill. To see the machinery for grading and cleaning the coal, and the attention given to this work one would imagine the work of the inspectors wasn't very laborious.

Principal McNally who has been appointed to instruct the Dalhousie classes in mathematics, mechanics, and mechanical drawing is not only a splendid and efficient teacher, but he is very popular among the Springhill people and the boys in the mining school. The boys have many times been benefitted by his knowledge and the kindly interest he has taken in their efforts to obtain an education. His appointment is very popular in town.

Springhill has had another strike. This time it was the mechanical department where the trouble originated. The stationary enginemens and firemen struck for an advance of 2 cents per hour, and some of the railway men engaged in shunting work struck for the same rates as those paid for main line work. The whole of the workmen were thrown idle by this strike and everything stood for two days until the matter was settled. The management finally conceded to the demands of the men and work was resumed.

AROUND THE COLLIERIES.

Dom. No. 1 Colliery is producing 2,500 tons daily, which is good work for one shaft single shifted.

Mr. E. Copley of Westville is now assistant of the DeBert coal mine. Mr. Copley is a pushing chap, and DeBert may be heard from.

The big compressor at Dom. No. 3 Colliery is receiving a new coat of paint and when finished will be one of the finest looking pieces of machinery in the province.

A new haulage wheel and shaft was put in at Dom. No. 1, between shifts last week. This was done without one hours delay to the colliery and speaks well for Engineer McLean and his staff.

Arrangements are about complete to run Dom. No. 1 pumps with steam from International Colliery. This will mean a great saving of air as more than one third the air supplied is used for pumping.

The Dom. Coal Co. are banking a large quantity of slack these days. This is on account of the damage to their wash plant by the recent fire. It is expected the plant will be in operation in about two weeks.

Water in the International Colliery is at present very heavy. The company are boring another hole for a spare steam pipe. They realize that if anything should happen the present steam line the colliery would be shut down for some time.

The foundations for the engines, and the colliery building at No. 6 is being rushed ahead rapidly. The boiler house which is of brick and steel, is about complete. There are four 250 h. p. Babcock and Wilcox boilers on the ground ready to be installed. On account of the distance of this colliery from the Gen'l machine shop, the company have built a splendid shop, which will be fitted with lathe, planer, drill, pipe machine and steam hammer, so that nearly all the repair work can be done at home.

Among the first letters read on the editor's return from a holiday was one containing these sentences. "The present issue is worth the subscription. Rambler has the right explanation for all our labor troubles. I would like to see this issue of your paper in every home at this colliery. It would give some, something to think about." Another correspondent well up in the minerals of this province, and at present holding an important position in the United States Steel Corporation, complaining of not receiving his paper, incidentally remarks, "I always enjoy reading it. Your discussion of the ore question is particularly interesting, and you are—between ourselves—absolutely right."

The Springhill lamp house is superior to all others in the Province of Nova Scotia. Besides a perfect equipment of machinery for cleaning, filling and testing the lamps, the engine house is a model, being commodious, comfortable and well ventilated.

The miners who had the pleasure of viewing Mr. John Cumming's exhibit of mining tools are loud in their praise of them. The boring machine is made on the principle of boring at a moderate rate, but requires much less strength than most of the machines of its kind. The augers are perfect in their material and workmanship. The stemming gear is of copper tending to the greatest safety, in using, and convenience in carrying round from place to place. The picks are the Cummings pick so celebrated and much sought after in Pictou Co. and elsewhere. Heavy at the eye, evenly anchored, and medium weight, they easily do the greatest amount of work with the least exertion. The mall is not so heavy as the common pit mall, but is better liked than the long tapering ones now in use. The whole outfit is complete in workmanship and finish, and we are not surprised, for after all it comes from the hands of a man whose whole life has been a training along the special lines of mining tools and machinery. The steel rope socket, swivels, clamps, etc. have only to be seen to at once recognize their strength and adaptiveness.

The assurance that the Foord pit seam had not thinned or become broken at the Allan Shaft sinkings, but that on the contrary the seam had if anything thickened and improved in quality is a matter of far reaching importance to Stellarton in particular and to the county and province generally. The coal is not, as stated in some of the papers, flat, but lies at the comparative easy, indeed in some cases desirable, angle of 15 degrees. The thickness of the seam has not been ascertained to an inch, but it is not any less than 45 feet thick. The Record puts it down at that figure, though it is possible on accurate measurements being made it may be found to be 46 or 47 feet thick. Needless to say this is an amazing thickness for a seam of bituminous coal. It is not perhaps the thickest known seam, but it is the thickest seam accessible to a market. It is asserted by the officials of the company that there is not a flaw in the seam from top to bottom, that is, there are no bands, big or small, of fireclay. Tests of the coal already have been made and the reports are of the most glowing description. It is claimed to be superior to most soft coals on the continent as a steam raiser and coke producer. The Record has not as yet seen a sample of the coal, but will endeavor to view the seam shortly and make true criticism. Meantime all concerned are congratulated on the more than fulfillment of their expectations.

Coal Shipments September 1905.

DOMINION COAL COMPANY, LTD.

—Output and Shipments for September 1905—

	—Output—	—Shipments—
Dominion No. 1	49,520	
Dominion No. 2	46,070	
Dominion No. 3	32,409	
Dominion No. 4	55,500	
Dominion No. 5	68,739	
Dominion No. 6	4,718	
Dominion No. 7	14,434	
Dominion No. 8	19,977	
Dominion No. 9	30,321	
	322,288	299,403
Shipments for Sept. 1904		276,454
Increase " 1905		22,949
Total shipments 9 mos. 1905		2,123,170
" " 9 " 1904		2,096,935
Increase 9 " 1905		26,235

CUMBERLAND RAILWAY & COAL CO.

Shipments for Sept. 1904	37,933
" " 1905	32,934
Decrease " 1905	4,999
Total shipments 9 mos. 1905	294,725
" " 9 " 1904	316,466
Decrease 9 " 1905	21,741

ACADIA COAL CO.

Shipments for Sept. 1905	26,514
" " 1904	21,465
Increase " 1905	5,049
Total shipments 9 mos. 1905	189,085
" " 9 " 1904	188,705
Increase 9 " 1905	380

NOVA SCOTIA STEEL & COAL CO.

SYDNEY MINES.	
Shipments for Sept. 1905	53,931
" " 1904	50,916
Increase " 1905	3,015

MARSH MINE

Shipments for Sept. 1905	4,877
" " 1904	1,535
Decrease " 1905	3,342
Total shipments 9 mos. 1905	398,095
" " 9 " 1904	350,846
Increase 9 " 1905	47,249

INVERNESS RY. & COAL CO.

Shipments for Sept. 1904	18,602
" " 1905	14,745
Decrease " 1905	3,857
Total shipments 9 mos. 1905	94,702
" " 9 " 1904	125,346
Decrease 9 " 1905	30,644

INTERCOLONIAL COAL CO.

Shipments for Sept. 1905	19,755
" " 1904	16,582
Increase " 1905	173
Total shipments 9 mos. 1905	139,429
" " 9 " 1904	184,072
Decrease 9 " 1905	45,243

Intercolonial Railway.

TENDER FOR TANKS.

Scaled Tenders addressed to the Secretary of the Department of Railways and Canals, Ottawa, Ont., and marked on the outside "Tender for Tanks" will be received up to and including

TUESDAY, OCTOBER 17TH, 1905

for the construction of seven 50,000 gallon WATER TANKS, erected complete; one at each of the following places: Gibson, Upper Cross Creek, Boiestown, Blackville, Chatham Junction and Loggieville on mondville, P. Q.

Plans and specifications may be seen at the Station Master's Office the office of the Chief Engineer Moncton, N. B. and at Drummondville, P. Q. at may be obtained.

All the conditions of the specification must be complied with.

Railway Office,
Moncton, N. B.

D. POTTINGER,
General Manager.
30th September, 1905.

INTERCOLONIAL RAILWAY

On and after Sunday, JUNE 4th 1905 trains will run daily, Sunday excepted, as follows:—

—TRAINS LEAVE STELLARTON—	
No 79 Mixed for Trenton	6.30
78 Mixed for Hopewell	6.55
18 Express for Halifax and St. John	7.40
21 Mixed for Pictou Landing	7.49
62 Mixed for Mulgrave	7.45
55 Mixed for Mulgrave	8.15
19 Express for Sydney	10.55
56 Mixed for Truro	11.00
20 Express for Halifax and Montreal	13.35
142 Mixed for Pictou	16.00
89 Express for Sydney	16.05
101 Mixed for Pictou Landing	15.50
22 Mixed for Hopewell	16.50
77 Mixed for New Glasgow	18.45
80 Express for Halifax	18.45
65 Mixed for New Glasgow	19.40
17 Express for New Glasgow	21.15
66 Express for Pictou	21.15

—TRAINS ARRIVE AT STELLARTON	
78 Mixed from Trenton	6.55
65 Express from New Glasgow	19.30
21 Mixed from Hopewell	7.35
55 Mixed from Truro	7.55
62 Mixed from Mulgrave	8.00
19 Express from Halifax and St. John	13.15
142 Mixed from Pictou	16.45
89 Express from Sydney	15.55
101 Mixed from Montreal and Halifax	15.50
22 Mixed from Pictou Landing	16.40
77 Mixed from Hopewell	18.10
80 Express from Sydney	18.45
66 Express from New Glasgow	19.35
17 Express from St. John and Halifax	21.05
66 Express from Pictou	21.10

Atlantic run by Atlantic Standard time Twenty four o'clock is mid night. Moncton, N. B. June 1st, 1905

MONTREAL STEEL WORKS Limited.

STEEL CASTING
FORGINGS,
SPRINGS,
FROGS,
CROSSINGS.

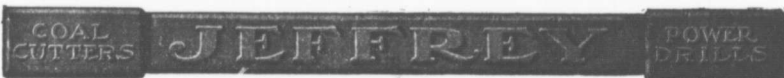
We make a Speciality of cast Steel WHEELS
and other
Steel Castings for

MINING PURPOSES.

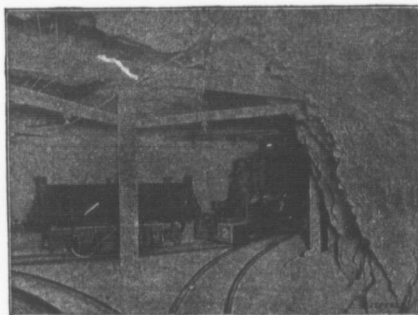
INTERLOCKING SWITCH AND SIGNAL Plant

(Under the patents of Saxby & Farmer, Limited, of London Eng)

CANAL BANK, POINT ST. CHARLES MONTREAL—



ELECTRIC
LOCOMOTIVES



COMPLETE
MINE
EQUIPMENT.

The type of JEFFREY 6 ton single end control Electric Locomotive shown is designed for Copper Haulage.

The Jeffrey Mfg. Co., Columbus, Ohio, U. S. A.

Branches: New York, Chicago, Pittsburgh, Denver, Charleston, W. Va. Knoxville, Tenn.



Miners Wanted Immediately

50 men can find steady Employment at the Coal Mines at Minto, N. B.

Apply to **W. C. HUNTER.**

Norton, N. B. Manager N. B. Coal & Railway Co.

More Miners Wanted.

WANTED by the Maritime Coal & Railway Co., Limited at Chignecto, Nova Scotia, 50 Miners and Helpers. Apply to,

JAMES BAIRD
Mine Manager.

Chignecto, Aug. 18-05



**Double Streng
Culvert Pipe a
Specialty.**

Canadian
Sewer
Pipe
Co'y,

HAMILTON, and TORONTO,
—ST. JOHN, QUE.—

Allis-Chalmers-Bullock, LIMITED.



One of our Ingersoll-Sergeant duplex compound air compressors driven by a Doble Water-wheel furnishes power for a Lardo, B. C. gold mine.

WORKS: Montreal,

HALIFAX OFFICE, 146 Hollis St.

HYEL & PATTERSON, INCORPORATED/ CONTRACTING ENGINEERS, PITTSBURG, - - - U. S. A.

Designers, Manufacturers and Builders of
Complete Coal Mining Equipment,
INCLUDING

STEEL HEAD FRAMES, STEEL TIPPLES,
CAR HAULS,

Conveying & Elevating Machinery
Coal Washing Machinery.



Summary of Regulations for disposal of Minerals on Dominion Lands in Manitoba, the North-west Territories and the Yukon Territory.

Coal—Coal lands may be purchased at \$10 per acre for soft coal and \$20 for anthracite. Not more than 320 acres can be acquired by one individual or company. Royalty at the rate of ten cents per ton of 2000 pounds shall be collected on the gross output.

Quartz—Persons of eighteen years and over and joint stock companies holding free mineral certificates may obtain entry for a mining location. A free miner's certificate is granted for one or more years, not exceeding five, upon payment in advance of \$7.50 per annum for an individual, and from \$5 to \$15.00 per annum for a company, according to capital.

A free mine, having discovered mineral in a place, may locate a claim 1500 x 1500 feet by marking out the same by two equal parts, bearing location notices, one at each end on the line of the lots or on the line of a mining recorder's office, one additional day allowed for every additional ten miles or fraction. The fee for recording a claim is \$5.

At least \$100 must be expended on the claim each year or ten to the mining recorder in lieu thereof. When \$500 has been expended or paid, the locator may, upon having a survey made, and upon complying with other requirements, purchase the land at \$1 an acre.

Provision may be granted by the Minister of the Interior to locate claims containing iron and mica, also copper in the Yukon Territory, of an area not exceeding 100 acres.

The patent for a mining location shall provide for the payment of Royalty of 2 1/2 per cent of the sales of the products of the location. **Placer Mining**—Manitoba and the N. W. T., excepting the Yukon Territory—Placer mining claims generally are 100 feet square; entry fee, \$5, renewable yearly. On the North Saskatchewan River claims are either bar or bench, the former being 100 feet long and extending between high and low water mark. The latter includes bar diggings, but extends back to the base of the hill or bank, but not exceeding 1000 feet. Where steam power is used, claims 200 feet wide may be obtained.

Dredging in the rivers of Manitoba and the N. W. T., excepting the Yukon Territory—A free miner may obtain only two of five leases of five miles each for a term of twenty years, renewable in the discretion of the Minister of the Interior.

The lessee shall have a dredge in operation within one season from the date of the lease for each five miles, but where a person or company has obtained more than one lease one dredge for each fifteen miles or fraction is sufficient. Rental, \$10 per annum for each mile of river leased. Royalty at the rate of two and a half per cent collected on the output after it exceeds \$10,000.

Dredging in the Yukon Territory—Six leases of five miles each may be granted to a free miner for a term of twenty years, also renewable. The lessee's right is confined to the submerged bed or bars in the river below low water mark, that boundary to be fixed by its position on the 1st day of August in the year of the date of the lease.

The lessee shall have one dredge in operation within two years from the date of the lease, and one dredge for each five miles within six years from date. Rental \$800 per mile for first year and \$10 per mile for each subsequent year. Royalty same as placer mining.

Placer Mining in the Yukon—Creek, gulch, river and hill claims should not exceed 250 feet in length, measured on the base line or general direction on the creek or gulch, the width being from 1000 to 2000 feet. All other placer claims shall be 250 square feet.

Claims are marked by two legal posts, one at each end, bearing notices. Entries must be obtained within ten days, if the claim is within ten miles of mining Recorder's office. One extra day allowed for each additional ten miles or fraction. The person or company staking a claim must hold a free miner's certificate.

The discoverer of a new mine is entitled to a claim of 1000 feet in length, and if the party consist of two, 1,500 altogether, on the output of which no royalty shall be charged, the rest of the party ordinary claims only. Entry fee \$10, Royalty at the rate of two and one half per cent on the value of the gold shipped from the Yukon Territory to be paid to the Comptroller.

No free miner shall receive a grant of more than one mining claim on each separate river, creek or gulch, but the same miner may hold any number of claims by purchase, and free miners may work their claims in partnership by filing notice and paying fee of \$2. A claim may be abandoned and another obtained on the same creek, gulch or river, by giving notice and paying a fee.

Work must be done on a claim each year to the value of at least \$200.

A certificate that work has been done must be obtained each year, if not the claim shall be deemed to be abandoned, and open to occupation and entry as a free mine.

The boundaries of a claim may be defined absolutely by having a survey made and publishing notices in the Yukon Office of Gazette.

Petroleum—All unappropriated Dominion Lands in Manitoba, the North West Territories, and within the Yukon Territory, are open to prospecting for petroleum and the minister may reserve for an individual or company having machinery on the land to be prospecting an area of 920 acres for each period as he may decide, the length of which shall not exceed five times the breadth. Should the prospector find oil in paying quantities and satisfactorily establish such discovery, an area not exceeding 64 acres, including the oil well, shall be sold to the prospector at the rate of \$1 an acre, and the remainder of the tract reserved, namely 280 acres, will be sold at the rate of \$3 an acre, subject to royalty at such rate as may be specified by Order in Council.

W. W. CORY

Dept. Interior.

Deputy of the Minister of the Interior

Miners Wanted To Chew BULL DOG TOBACCO,

Because it is the only Tobacco
which does not excite Thirst
for Water after using.

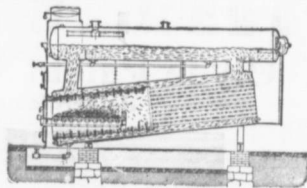
TRY IT!

The St. Lawrence Tobacco Co., Ltd.

—Montreal—

—W. B. Revue, Halifax Representative—

SAVES 10 PER CENT.



An externally fired boiler wastes fuel because of the radiation of heat from the outside of the brickwork and the leakage of cool air above the fire, which causes a double loss by heating the excess of air and by producing imperfect combustion.

In a Robb Mumford internally fired boiler the heat is transmitted directly to the water, and air cannot get into the furnace except through the regular drafts. This makes a saving of at least 10 per cent.

Robb Engineering Co., Ltd.
Amherst, N. S.

FINE CHOCOLATES.

Particularly Nice Chocolates Our Specialty.

High Grade Covering, Delicious Centres and handsome appearance

MAKE OUR CHOCOLATES VERY POPULAR.

ASK FOR THEM.

G. J. HAMILTON, & SONS.

Pictou, Halifax, St. John.

Contractors to H. M. Government.

ALLAN, WHYTE & CO.

Clyde Patent Wire Rope Works,
Rutherglen, Glasgow Scotland.

CABLEGRAM

Ropery, Rutherglen

SCOTLAND!



A I
A B C
and Liberts
Codes Used

Section of worn Haulage Rope supplied by us to Messrs Outtrim, Howitt and British Consolidated Coal Company, Outtrim, Victoria, Australia, showing condition when taken off and substituted by another Rope of our manufacture. Length 7,260 feet by 4 1/2 inch Circ. made of Special Improved Plough Steel Wire Working on gradient of 1 in 3 to 1 in 6.

Manufacturers of All Descriptions of WIRE ROPES for COLLIERIES, MINES, CABLE TRAMWAYS

AERIAL ROPEWAYS, TRANSMISSION of POWER, SUSPENSION BRIDGES, ETC ETC.

Wire specially selected for our Requirements.

Also Makers of all Classes of Specially Flexible Wire Ropes, for Cranes, Winches
Capstans, Hoists, Etc.

Agents in Nova Scotia:—Wm. Stairs, Son and Morrow, Limited.
Agents in New Brunswick, W. H. Thorne & Co. St John.

Different sizes and quantities
kept in Stock.

CAPE BRETON COLLIERY.

NEW CAMPBELTON CAPE BRETON N. S.

SUPERIOR
STEAM AND DOMESTIC COAL
SAFE AND CONVENIENT SHIPPING PORT

The Nearest Coal Port to Newfoundland

Just inside Entrance Great Bras d'Or.

Vessels from P. E. I. and Western Ports, via St. Peter's Canal, will save time by loading at New Campbellton. Smooth Inland Navigation. Quick Despatch.

- - J. T. Burchell Manager.

INVERNESS IMPERIAL COAL

INVERNESS RAILWAY and COAL COY.
Inverness, Cape Breton.

Miners and Shippers of INNERNESS (BROAD COVE)

Screened, Run-of-Mine, Slack.

—First Class both for Domestic and Steam Purposes.—

BUNKER COAL Shipping facilities of the most modern type at Port Hastings, C. B. for prompt loading of all classes and sizes of Steamers and sailing vessels.

Apply to Inverness Railway and Coal Company, Inverness, Cape Breton; Wm. Petrie, Agent, Port Hasting, C. B.

INVERNESS RY. & COAL CO'Y

Time Table No. 18, Taking effect at 1st Jan. June 5th, 1905.

EASTBOUND			STATIONS.	WESTBOUND		
Read Down				Read Up		
No. 22	No. 54			No. 51	No. 53	
a. m.	p. m.			a. m.	p. m.	
L 11 15	L 4 00		C. TUPPER JUNCTION	A 11 08	A 3 15	
S 11 21	S 4 05		PORT HAWKESBURY	S 11 03	S 3 07	
A 11 40	A 4 18			L 10 50	L 2,5	
	F 4 27		PORT HASTINGS	A 10 40		
	S 4 55		TROY	F 10 29		
	F 5 05		CHEENISH	S 10 18		
	F 5 17		CRAIGMORE	F 10 05		
	F 5 30		LIQUE	F 9 45		
	A 5 45		CATHERINES POND	F 9 32		
	L 5 55		PORT HOOD	L 9 18		
	F 6 10		GLENCOR	F 8 55		
	S 6 20		MADOT	S 8 25		
	F 6 43		GLENDYRE	F 8 15		
	F 7 03		BLACK RIVER	F 8 00		
	S 7 17		STRATHLORE	S 7 47		
	A 7 30		INVERNESS	L 7 30		
	p. m.			a. m.		

Trains make close connections at Pt. Tupper Jct. with I. C. R. passenger trains, excepting the Maritime Express

THE PORT HOOD COAL COMPANY LIMITED

Miners of

SCREENED
 STEAM
 STOVE
 SLACK

COAL,

Mines and Shipping Pier, Port Hood; C. B.

Especial care is taken in preparing our coal for Domestic Uses. For Stoves, Grates and Ranges, it has no superior in Cape Breton or Nova Scotia.

For prices f. o. b. at Port Hood and delivered at any point including all stations in the Intercolonial or Dominion Atlantic Railways apply to

THE PORT HOOD COAL COMPANY, LIMITED

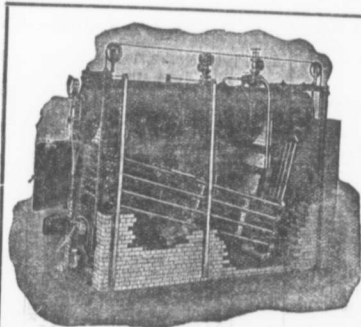
ADVERTISE IN THE MINING RECORD.

DOMINION BRIDGE CO., LTD., MONTREAL, P. Q.

BRIDGES

TURNABLES, ROOF TRUSSES
STEEL BUILDINGS
ELECTRIC & HAND POWER CRANES
Structural METAL WORK of all kinds

BEAMS, CHANNELS, ANGLES, PLATES, ETC., IN STOCK



BABCOCK AND WILCOX PATENT WATER TUBE
BOILER WITH SUPERHEATER.

BABCOCK & WILCOX LTD.

PATENT

SUPERHEATERS

Over 1,250,000 H. P. now in use.

Can be adapted to existing plants and to all types of
boilers effecting great economy in fuel consumption.

Write for our Circular giving detailed description.

HEAD OFFICE FOR CANADA.

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BRANCH—114 KING ST. WEST, TORONTO.



Use Our
OIL WASTE CANS,
—IN YOUR—
MILL and MINE,
—AND AVOID ALL—
Danger of FIRE

You can't afford to be
without them.

Oil & Waste

are among our
Specialties.

Austen Bros., Halifax, N. S.

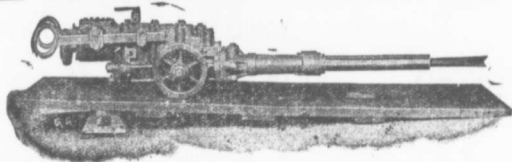
George Patterson,
BARRISTER, SOLICITOR, ETC.
NEW GLASGOW, N. S.
Successor to Sinclair and Patterson—

JERSEY - LILY - FLOUR.



*Best all round flour on the market.
Uniform in quality. Every barrel*

*can be depended upon. This flour can
only be had in Cape Breton at the stores
of the Dominion Coal Company.*

COAL MINING MACHINERY

"G" HARRISON IMPROVED COAL CUTTER.

HARRISON IMPROVED COAL CUTTERS.AIR COMPRESSORS
—of all Descriptions—

LITTLE GIANT STEAM OR AIR DRILLS

MANUFACTURED BY

Canadian Rand Drill Coy Works, Sherbrooke Que.**G. L. Burritt, Agent.**

Halifax Office, 116 Hollis St.

The Stirling Company**WATER TUBE BOILERS,****Over 2,000,000 Horse Power,**

of these Boilers in use in the United States and Foreign Countries. Made entirely of wrought steel. Employ no tube-caps or gaskets. Four man-holes give access to the entire interior, exposing every rivet, tube and joint in the boilers. Can be cleaned in ONE-FOURTH the time required by other types.

The Stirling Superheater Boiler, a combined water-tube boiler and superheater in one, for all degrees superheat from 50 to 250 degrees Fahr. The only commercially practical superheater for high degrees of superheat.

INDEPENDENTLY FIRED SUPERHEATERS.

**General Offices: - - - Pullman Building,
Chicago, U. S. A.**

Agencies:—New York
Boston
Philadelphia

Pittsburg
Washington
Cincinnati

Atlanta
New Orleans
San Francisco.

BRITISH BRANCH: -:- Manchester and London.

Acadia Coal Company, Limited.

STELLARTON, NOVA SCOTIA.

Miners and Shippers of the

CELEBRATED

ACADIA COAL.

Unexcelled for Steam, Domestic and General Purposes.

DELIVERED BY RAIL OR WATER.

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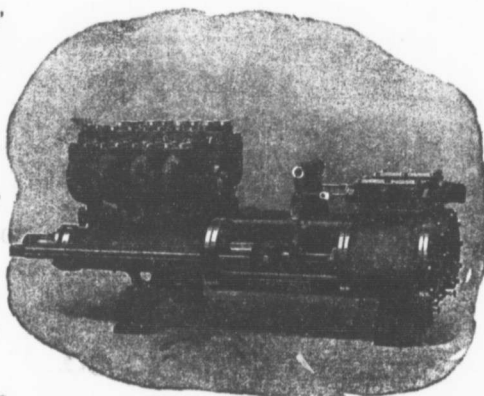
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Bituminous Coals, the celebrated "Reserve" coal for household use, "International" Gas coal, and the best Steam coal from its collieries on the Phalen seam.

—Yearly output 3,500,000 tons.—

ANALYSES.

ANALYSES OF GAS AND STEAM COAL MADE BY J. & H. S. PATTINSON, CHEMISTS,
—NEWCASTLE, ENGLAND.—

	STEAM COAL.	GAS COAL
CARBON.....	80 18 per. cent.	77 51 per. cent
HYDROGEN.....	5 11 " "	5 22 " "
OXYGEN.....	7 34 " "	6 72 " "
NITROGEN.....	1 16 " "	1 27 " "
SULPHUR.....	0 56 " "	3 07 " "
ASH.....	2 30 " "	4 10 " "
WATER.....	3 35 " "	2 11 " "
	100 00	100 00

Caloric Power of Steam Coal:—Pounds of Water evaporated from 212 per cent Fah, by one pound of the coal as determined in Thompson's Calorimeter,—14.8 lbs.

Shipping facilities at Sydney, and Louisburg, G. B., of most modern type. Steamers carrying
—5000 tons loaded in 24 hours.—

Special attention given to quick loading of sailing vessels. Small vessels loaded with
✎ quickest despatch. ✎

:: BUNKER COAL ::

The Dominion Coal Co. has provided unsurpassed facilities for Bunkering Ocean going Steamers with Dispatch. Special attention given to Prompt loading. Steamers of any Size are bunkered without detention.

By Improved screening appliances lump coal for Domestic trade is supplied of superior quality.

Prices, Terms, etc. may be obtained at the Offices of the Company.

ALEXANDER DICK, General Sales Agent, Glace Bay, N. S. Canada.

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RAILWAY AND

COAL COMPANY.

OPERATING THREE
THICK SEAMS
NOS. 1, 2 AND 3.

—Miners and Shippers of the Well Known—

FRESH MINED SPRINGHILL COAL

... ANALYSIS ...

	NO 1	NO 2	NO 3
Moisture.....	2.02 %	1.41 %	2.71 %
Volatile combustible matter	18.94 %	27.93 %	28.41 %
Fixed Carbon.....	75.29 %	67.47 %	64.69 %
Ash.....	3.75 %	3.19 %	4.19 %
	100.00	100.00	100.00
Sulphur.....	1.15 %	.58 %	.79 %

BEST COAL FOR
LOCOMOTIVE USE.

Delivered By Rail or Water

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GENERAL STEAM PURPOSES.

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IN Lots To Suit Purchasers.

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