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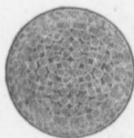
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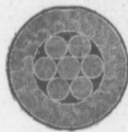
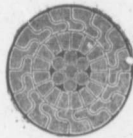
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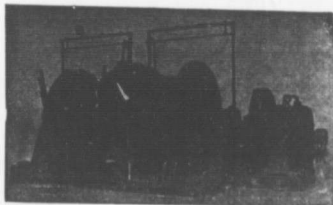
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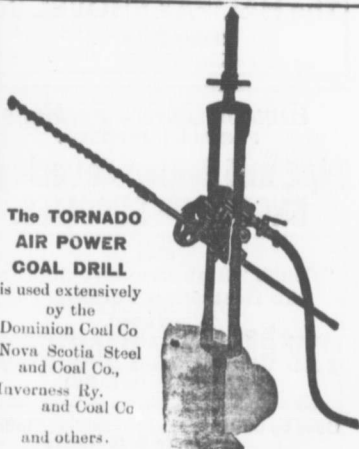
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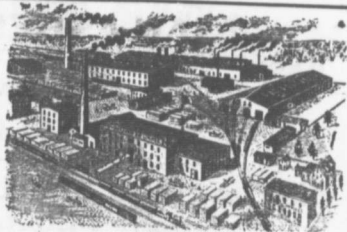


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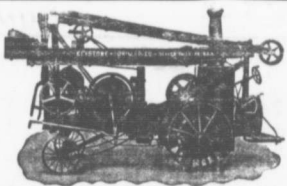
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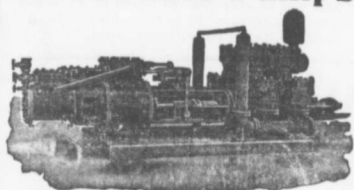
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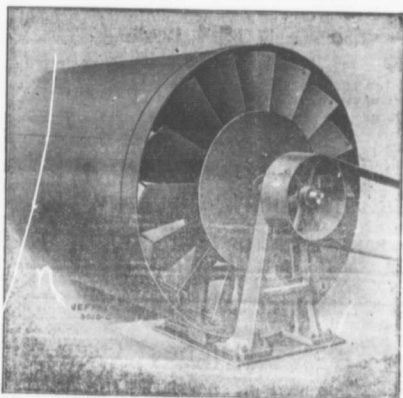
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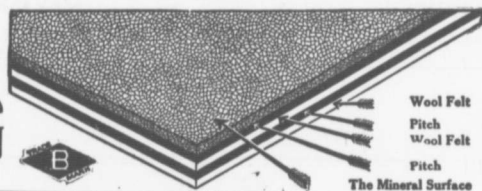
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The...
MARITIME MINING RECORD

Vol. 12, No. 5. Stellarton, N. S., SEPT. 8 1909. New Series

SELECTED QUESTIONS AND ANSWERS.

(Science and Art of Mining.)

GASES IN MINES.

Q.—Describe the operation of clearing gas out of a working. What precautions are necessary while doing so?

A.—The above question undoubtedly refers to accumulations of the gas known as fire-damp or CH₄, the most abundant kind of gas met with in coal mines, which results from the decomposition of organic matter and is a natural product of the coal and coal measure strata; or it may be taken to mean the gas known as black damp or CO₂, produced in a variety of ways, such as the decomposition of organic substances, the burning of lamps, candles, use of explosives, breathing of men and animals, and also given off by coal seams and coal strata, especially so in shallow deep mines.

The other two gases, viz., Carbon Monoxide and Sulphuretted Hydrogen which are met with only under exceptional circumstances, and which vitiate the atmosphere of the mine with deadly and poisonous gases, may in this case be left out of consideration. Sufficient here to say that whichever gas may be encountered requires to be diluted and rendered harmless by the application of a sufficient amount of fresh air in accordance with the requirements of General Rule 1 of the C. M. R. A.

Having made this preliminary introduction regarding the vitiation of the atmosphere of the mine by the different kinds of gas met with, I propose to explain the operation of clearing gas out of a working, and here it may be stated that the presence of gas is due to one of two causes, viz., deficient or inadequate ventilation as required by the General Rule 1 or that of faulty ventilating appliances, such as air doors, air crossings, stoppings, deranged or faulty brattices or air pipes, causing leakage of air; consequently the air produced and provided is not carried forward and utilized to keep the working clear of gas. Of course under what may be termed abnormal circumstances such as a blower of gas or a heavy fall causing a blockage, either of which would be of such a character as to cause an accumulation of gas to take place, and which when the blower was spent, or the fall removed, would probably cause normal conditions to exist again.

The operation of clearing gas may then be said to be the application of an adequate volume of air, giving a sufficient amount of energy to effect its removal, or in other words dilute and render it harmless as required by General Rule 1.

The first thing requisite is the provision of an ample and liberal volume of air, and the conduction and guidance of the air in a systematic and proper manner to the working face, so as to keep the atmosphere of the mine

free from traces of gas. This of course is effected by fixing brattice or air pipes, or both, according to the conditions prevailing. Assuming a large body or accumulation to exist, the best method to adopt is that of removing it gradually in sections, the gas is more easily broken up, and in addition the return current is not as highly charged as by directing the air current on to the whole body of gas fouling that portion of the working.

The precautions necessary whilst doing so for its safe removal are: (a) The withdrawal of all workmen from the part or parts found dangerous, also all workmen situated on the return side of the accumulation. (b) The selection of careful and trustworthy persons to assist in its removal, such as fixing of timber, brattice, and air-pipes, each and every person to be equipped with a good type of safety-lamp, each lamp to be locked, examined, and found safe by the official in charge. (c) In fixing brattice or air-pipes care should be taken to keep on the intake side. The safety lamps also kept in a safe position from the accumulation near the floor. In conjunction with these precautions an ample supply of materials such as timber, brattice, laths, nails and pipes, should be available for the work.

[NOTE.—It cannot be too strongly impressed upon mining men that the safest and in the long run the quickest way of removing a large quantity of gas is to deal with it in small amounts. This applies to all pits whether ventilated by fan or furnace. This applies equally to CO₂ and CH₄, though of course it is not so difficult to remove CH₄ from dip workings as it is from rise workings, while the contrary holds good in the case of CO₂.]

GOB FIRES.

Q.—You are asked to say what are the chief indications of a gob-fire. Name the principal gases given off. What steps would you take to deal with a gob-fire?

A.—The indications given off when a gob is on fire may be said to be of a two-fold character.

1. Heating.—When a gob fires the part of the mine in close proximity naturally is affected. The heat produced by the fire is transmitted to the air current, which may be affected for a considerable distance from the seat of the fire. Thus in case an exceptional high temperature exists in any part of the roads through the gob, other things being in order and ventilation as usual, a gob-fire should be suspected, and a close examination made as to the part of the gob the heat is coming from.

2. Gob Stink.—When a gob is on fire its occurrence may be detected by the smell given off due to the various gases given off from the fires, the character of which will be governed by the stage of combustion.

The principal gases given off from a gob fire are:—
 1.—Carbon Monoxide, which is produced by incom-

plete combustion, such as is most likely to take place when a gob is on fire. This gas is of a most dangerous character, a very small percentage being fatal to life when inhaled into the lungs.

2—Carbon Dioxide. This is produced when the stage of combustion is complete, due to the combination of carbon with oxygen. This gas is of a poisonous character and also extinguishes any light when in sufficient proportions.

3. Sulphuretted Hydrogen. This gas is given off from gob-fires in small proportions, and is of a very deadly character, a very small percentage being sufficient to produce death. It is due to the presence of this gas that gob-fires may be detected by the peculiar stench.

In dealing with a gob fire the mode of procedure is governed by its position and extent. If the fire is only of small character and easily accessible it should be dug out and sent to the surface in iron tubs. If however the fire is of a more serious character and the method of digging out impracticable, then a more practical method must be adopted, which consists of cutting off the supply of air from the part of the mine the fire exists. This is done by erecting brick stoppings tightly packed with sand. In performing such work sites should be selected and stoppings built of a double character, the distance between the two stoppings being tightly packed in with sand. The stoppings in the return should be built first and also a pipe should be inserted in the brick work fitted with a pressure gauge and tap, in order to ascertain the pressure of gas to enable the gas to be run off if required. After the above stoppings have been completed, the stoppings in the intakes should be built. By the above method the air supply is cut off and the fire ultimately extinguished. There are also other methods which may be adopted. These are:—

1.—By directing a supply of CO₂ on to the fire by means of pipes; the result is that the fire is extinguished by the action of the above gas.

2.—By flooding with water. When a fire is extinguished such a hold that ordinary methods fail to put it out, flooding is applied. Water is pumped into the mine affected, and thus flooded; the fire by this means is thus extinguished.

This method should only be adopted when all others have failed, as the water has to be again pumped out of the mine, and the effect of the water on the roadways is disastrous and the expense enormous. Neither of the two latter methods is often adopted, and only as a last resource.

FIRE DAMP DETECTOR.

The Berlin Lokal Anzeiger describes an invention, consisting in a simple apparatus for indicating the presence of fire-damp in coal mines, which may eventually prove a boon to miners. The working of the apparatus depends upon the fact that the electrical resistance of selenium decreases when exposed to light. In using the above mentioned invention in mines, a cell containing selenium is placed in an electric circuit containing a relay and a battery. Under normal conditions a selenium cell is exposed to the bright beams of a Davy miners' lamp. The bright beams of a Davy selenium cell to offer a comparatively small resistance to the current of the battery with which it and the relay are in circuit, so that the relay exerts a comparatively powerful pull on its armature and keeps it attracted. If, however, the lamp becomes surrounded by fire-damp, its light becomes duller, and the resistance offered by the selenium rises, so that the current flowing through

the relay is weakened. In consequence of the decrease of attractive force of the electro-magnet of the relay its armature is pulled back by a spring against a contact which closes an alarm circuit, and causes electric bells to be rung at all the necessary points, thus indicating the presence of fire-damp at the spot where the miners' lamp is placed.

COLLIERS AND RESCUE WORKS.

In a paper submitted to the Midland Institute of Mining Engineers by Sergeant A Winborn, who has charge of the Tankersley Rescue Station, the author observed that at times of accident the average miner was always ready to risk his life in an attempt to save other lives. At the Hamstead disaster, probably the most severe test to which any rescue apparatus, probably the most subjected, scores of the local miners had ever been asked to descend the mine, although it was repeatedly explained that five minutes underground at that time meant certain death to the ordinary unprotected mortal. That was convincing proof that we had in this country the finest material from which to recruit men for rescue work. The difficulty lay in convincing such men of the value of the rescue apparatus, and the necessity of being trained to its use in order that men might qualify themselves for what was, in the fullest sense, a noble and self-sacrificing work, and of the utter futility of trying to do any good on such occasions without apparatus and training. Convince the men of this fact, and much will have been accomplished towards getting them to take an intelligent and lively interest in the subject. Besides being very brave, the average miner is very conservative. The method of effecting a rescue by means of sheer muscular force and daring, without the aid of scientific apparatus, appeals to him most. Miners have a dislike for anything 'new fangled', and, consequently, they view the advent of the rescue apparatus with certain feelings of distrust, and it is received into their midst with obvious reluctance. Nevertheless, once they realize from personal experience in the practice gallery the true value of an apparatus, they enter into the study of it whole heartedly, practice with great zeal, and speedily acquire wonderful confidence in its use.

The B. Greening Wire Co., Hamilton, have instructed their architect Mr. W. A. Edwards of the same City to prepare plans for a new Wire Rope Factory. It will be a one story concrete and brick structure 124ft. x 112 ft., with saw tooth roof construction. The flooring will be solid concrete so as to withstand the weights of heavy machinery and large reels of cable. It will be up-to-date factory in every respect. Orders have been placed for additional rope machinery of the very latest design. It is expected the new mill will be completed and machinery installed by first November next. The present rope mill will be used as an extension of the Wire working branch of the business and will provide the much needed room for the rapidly growing demand for their wire guards, garden fencing and bordering, factory jockers, etc.

Three Conciliation Boards have declared that the recognition of the U. M. W.'s is a matter which rests solely and wholly with the coal companies. In view of this Mr. Acklands visit to C. B. cannot have any bearing on the position of affairs.

MARITIME MINING RECORD.

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SEPT. 8

SPRINGHILL.

If asked "What is to be the outcome of the present trouble at Springhill" one might not lay himself open to a charge of Pharisaism if he put on a grave face and replied "God only knows." There have been many strikes at Springhill; one or two of these have been grave and serious enough, but never a strike that looked so ominous as the present. What is to become of Springhill? is no silly or sensational question. Is Springhill to be blotted off the map of Cumberland Co. Will its stores have to close up. Will its householders have to leave their houses to rot while they hie to other parts in search of work. Will the workmen be required to lift their gaiters and for good. What will become of Springhill is not merely a serious, it is a solemn question. Is the place, which notwithstanding its many troubles, for a quarter of a century, blossomed like the rose to become once again a waste and a wilderness. Are the hard earned savings of hundreds of thrifty men, and are the investments in houses and lands to be swept away as if by a fell stroke. There are very many who are almost despairing, there are a few who trust that joy will come in the morning. The strikers alone seem to be hopeful. They declare that the holding out, and the threats of a reduction are but parts of a scheme of bluff on the part of the company. Are they sure of their ground? We are not alarmists, and yet we are fearful of the outcome if the strike continues. There is no necessity for the company to bluff. It has for some years past been losing money in carrying on operations. It is losing money now in merely keeping the pits clear of water, but its losses at present bear no comparison to the losses made when in operation, the losses made when it should be making profits. What possible inducement is there to start the pits again at former prices for cutting if the starting and carrying on of operations is to result in loss? Is the company to continue to lose until it becomes utterly bankrupt. No sane man will say that the company should continue under such conditions. At the time the men first talked of striking the management notified them that if they did not return to work immediately none would be given work again unless at a reduction of ten per cent. The men are still out and a second notice intimates that the reduction will be fifteen per cent. The

Record has had no direct communication with the management, but indirectly we are assured that what is contained in this second notice is not bluster, but the actual determination of the Springhill company. The chief cause of the strike is the refusal of the management to recognize a foreign labor union. In former cases of strike the public may not have concurred wholly in the ways of the management, in this instance the sympathy of the public is with the management, and not with the men.

- Rubs by Rambler.

The true object of the invasion of Nova Scotia by the U. M. W's has, quite unintentionally, and innocently been laid bare. On the authority of a C. B. paper, one of the principal leaders of the six who are conducting the campaign on behalf of the U. M. W's gave, as a reason why there was no strike called at Sydney Mines, that the U. M. W's in that locality were "not strong enough to hurt the company." Just so. That is the idea I held from the beginning of the object of the invasion of Cape Breton. They came not to sueor the workmen, but to hurt if possible the companies. If their real object in coming was to hurt the company, and the statement is from one of the U. M. W. leaders, then it could have been no object of theirs to help the men, for the surest possible way not to be in a position to help the men is to "hurt the company."

The question may be asked, 'was not the statement that they were not strong enough to 'hurt' the company only an instance of saying the wrong thing by a slip of the tongue.' People will not think so for many have asserted that the one object of the foreign agitators was to hurt the coal trade of the Province and so hurt the operators. The more harm inflicted on the Nova Scotia operators the better for the operators in the U. S. and the better for the American miners in those sections where trade conditions are unsatisfactory. But whether or no it was the intention of the foreigners to 'hurt' the company, they have succeeded in hurting not only the coal companies but the province at large. Hundreds of thousands of dollars have been lost to the workmen, two or three hundred thousand dollars have been lost to the revenues of the province, and worse than all customers have been lost for provincial coal, who possibly may be lost forever, for, as is well known to business men a lost customer is hard to recover, and these lost customers have been found by the American coal operators, whose servants, notwithstanding all the protests, the U. M. W's are. To some extent the American operators' emissaries may be hurting the Dominion Coal Co. and the Cumberland Ry. and Coal Co., but in a very much larger degree are they hurting the men they profess to be anxious to help. The workmen in the end will be the mighty sufferers. And it is surprising that the men of C. B. cannot see that there can only be one outcome of the trouble. They will require to go back without a single

point gained—that is some of them. Some will never get a chance to go back. Their part in the strike will amount to a loss of wages, a loss of work and a loss of honor—a total loss. The eyes of some of the men are being opened and they are returning to work. The sooner their example is followed the better. The continuing of strike is only prolonging the agony. The U. M. W. are beaten now and the leaders know it. The sooner this fact comes home to the rank and file the better. Just as many of those who engaged in the Montreal C. P. R. strike are bitterly regretting it to-day, so will it be with the men on strike at Glace Bay. The future for them is full of regrets.

The Sydney Post says that the Dominion Coal Co's banks at No. 2 and Bridgeport are reaching the vanishing point and that when these disappear settlement talk from the Record and Gazette may be looked for. All the talk in the world should not induce or compel the Coal Co. to recede from its position of non recognition. If even the very remotest kind of recognition is accorded the U. M. W's, it were better that the company had surrendered unconditionally at the start. In the long run it would amount to about the same thing.

One travelling by train who is not stone deaf, is bound to hear a lot of things, new, most of them, some old; and persons are met too, whom one scarcely expected to meet. On the train from Montreal the other day I met a man from Morien, a Mayor of one of the colliery towns, and another who is familiar with coal operations in the Province, besides a large number of 'travellers' whom I knew not. I heard some things that were an agreeable surprise and other things that were a sorrow. Of course there were many funny things. There were sayings that caused neither sorrow, surprise or joy, simply because they were put down as too silly for anything. In this category was the statement that James Ross, Pres. of the Dom. Coal Co. had gone down to C. B. ready to make overtures to the U. M. W. The information was to the effect that Mr. Ross would do with the U. M. W's. in C. B. as they did with them in the United States. He would receive them as worked to the U. M. W. On this statement being made one of the company immediately replied: "I do not believe a word of that; Jas. Ross is no fool; he knows better than to take snakes in his bosom. Why if Jas. Ross did such a thing he would be only staving off the evil day, would be playing wholly into the hands of the foreigners, for the very remotest kind of recognition would be claimed by the agitators as a full surrender of the company. If Jas. Ross thought of such a thing, neither Wanklyn or Duggan could coincide with him for an instant." I put the statement down as another U. M. W. fake. From 'strikes' the talk switched off to the Halifax Herald. One gentleman very freely expressed his opinion as to the course adopted by that paper. He declared it was void of a shred of patriotism and sure to ferment strife and ill feeling. It was proclaiming vicious sentiments for the sake of the cents. It professed to be a great friend of the working-men all the while it cared not a straw for them. In the past the Herald had fought its own em-

ployees tooth and nail and had imported scab labor from Quebec, etc. He heard that Dennis had been remonstrated with as to the Herald's course in the C. B. strike, and that Mr. Dennis replied he thought the U. M. W's. would win out, and as that now looked improbable the Herald might as bottle its zeal on behalf of the poor down-trodden miners. This speaker's final remark was that the Herald's course was almost enough to cause one to disown the Conservative party.

Incidentally Keir Hardie's name was mentioned. This brought an Englishman with a very pronounced accent and with very pronounced ideas to his feet, or rather, and metaphorically, he 'took the floor'. "Keir Hardie," he said 'ought to be the unrest in India must be laid to his door. He is a violent socialist. He believes that no one should have more money, more privileges, more notoriety than Keir Hardie. He has no use for workingmen who do not concur fully with his views. Yes I say his language is seditious and really 'he haught to be ung'. And the queer thing is he spoke so earnestly that one was led to believe he, without scruple would have been 'appy to have attended the 'anging'. Bad and all as Keir Hardie is I could not wish him so ignominious an exit.

I have heard 'strike' talked in railway trains on railway platforms, and in divers and sundry places, and remarkable as it may appear I heard nothing but condemnation of the strikers. Outside of the members of the U. M. W's. and a few most unparliamentary and wholly selfish politicians, I have not met a single sympathizer with the course of the foreign organization. Whether the public are or are not acquainted with both sides of the question I cannot tell, I only state the facts as to what is being said by the people one meets.

The talk was desultory and uninteresting for a time until the statement was made that the Pictou mine managers were hiring Springhill strikers. This hit me all of a heap and I felt a falling at the stomach. Could it be true. I could not believe it. Well, said the news monger the bosses at Springhill say it is true. On arriving home I called up the Drummond colliery and asked if they had been hiring on men who had quit work at Springhill. Mr. Floyd in answer to the call said it was not true, and that the Record was authorized to give it contradiction without qualification, and this I am gladly doing for the Record. Next the manager of the Acadia Coal Co. was informed of the report. In his case there was a very little in the report, a little truth and a great exaggeration. Two men and a boy who had worked at Springhill but formerly were residents of Pictou County had been taken on, but not because they were strikers, or first class miners, or needed to fill a gap in the mine, but because they were good ball players, who might improve an acquisition to the local team. I was very glad indeed to hear there was so little in the story, for with the public I expect that the coal operators will show they can be at least as loyal to each other as certain infatuated workmen are toward the U. M. W. It may be asked by some: "Have you no word of censure for the Dominion Coal Co. in hiring the Belgians who wore the leaders in the strike at Inverness". My answer is "No." The taking on of the Belgians is a good

stroke of policy, and is a further display of good generalship on the part of Mr. Duggan. He is a wonderful strategist. If the old man's heart is growing tender he best quit the field and leave it to Mr. Duggan and his staff. I have said 'old man'. That needs qualification. They are a curious lot at Glace Bay and have many grades of old men. For instance, the boys in the store call McCann their old man. McCann refers to the youthful looking Revere as 'the old man next door'; Revere consigns people he wishes to get clear of to the dapper G. H. Duggan in these words 'see the old man', while Mr. Duggan when unwilling to turn a petitioner plump down lets himself off by saying 'that is a matter I must leave the old man to decide', the old man in this case being a quarter of a century younger than Lord Strathcona.

Some writers in the Halifax Herald cannot see why American capital should be welcomed to Nova Scotia while American labor unions receive scant hospitality.

There is all the difference in the world between foreign capital and foreign labor or labor organizations coming into a country.

Capital gives employment to labor wherever it comes from.

Foreign labor as labor or in the shape of the U. M. W. gives not employment to a single soul.

Foreign, American, capital coming into Nova Scotia would not permit its methods or modes of employing that capital to be supervised, dictated to, or interfered with in any way by any other capitalists native or foreign.

American unions in coming into N. S. seek to dictate the policy which the native unions will pursue, and the members of these must conform to the constitution, rules and bye-laws of the invading association.

From every civilized nation capital receives a hearty welcome, for it is necessary to the development of a country and as without it there would be no employment to natives.

Vast amounts of British capital are invested in the railways of the U. S. It is welcome, and yet the Americans have an alien labor act to exclude railway men coming out on contract.

If Japs or Chinese offered to invest ten millions in the development of Nova Scotia's minerals, everybody would rejoice; and yet Canada puts a \$500 tax on the Chinese to exclude them from the country.

In C. B. it is ridiculous that the U. M. W.'s should ask for recognition so long as the companies recognize the P. W. A. Fancy a concern having two rival boards of directors, one set of directors ordering or asking the workmen to do certain things and the other demanding certain other things. What would the workmen say? They would likely say 'we cannot serve two masters, one of you will have to give way and get out, and that is what the Dominion Coal Co. are saying: "We cannot have two unions; the U. M. W. must give way and get out,"

What will the Free Coal League, all the stock of which is held by the genial W. C. Milner, say to the following, clipped from the Coal Trade Journal:—"Henry M. Whitney, the well-known Boston capitalist, writes as a personal letter relative

to the Rhode Island coal proposition, stating that the new company is surely going to mine and sell coal. The promoters realize the prejudice that has existed and still exists regarding the quality of the coal, cost of mining, etc., but persons whose opinion can be relied upon assure the owners that the difficulties heretofore existing have been overcome. Within a week the company expects to have a mining engineer of high reputation from the Seranton district installed as superintendent. Mr. Whitney expresses the opinion that few enterprises that have been brought to his attention appear so great in possibilities. He looks for a very satisfactory future for the undertaking."

Geologists and others, interested in mineral production may think they know all the places in Nova Scotia in which coal is likely to be found. They may be in error. Scotland is a comparatively small and a rather old country and yet every now and again new coal fields are being discovered. Large seams of coal have been discovered in Mull, belonging to the Western Hebrides, Group of Islands. "Operations were conducted in Ardtub, some two miles from Bunessan, and after blasting away some rock an extensive vein of superior coal was exposed. It is quite close to the sea, a fact which minimises the cost of production and shipping. Prospecting is being continued further up the Island, among the mountains, in some parts of which operations have already been conducted with satisfactory results. There are here indications of a rich field of coal, but owing to the hilly nature of the district greater difficulties will be encountered in transit and shipment than at Bunessan. At the beginning of last century two gentlemen from the North made some efforts to get coal in Mull, but steam power was then unknown, and the difficulties in raising the necessary capital, and in procuring suitable mining plant and proper means of transit could not be surmounted, and the scheme was a failure. This time the conditions are otherwise. There is said to be every probability of the scheme assuming practical shape and of conferring a great boon on an otherwise workless district."

The Herald wonders if the "government of Canada" is going to allow a private corporation to close a public utility, and prevent the use of a national property such as coal, with the accompanying loss of royalty? The government of Canada has no choice in the matter. Nova Scotia's coal is Nova Scotia's asset, and the government of Canada has nothing to do but look on. The Cumb. Ry. & Coal Co. are no doubt prepared to dispose of the mine to any government at a reasonable figure. Prof. Shortt, it is said, has become an expert in the matter of cheap coal production. It might be a good idea for the local government to buy out the Springhill people and put the genial Professor in charge. All the other operators in the province would willingly look on and learn.

The splendid record of the Louisitania in docking in New York on Thursday evening instead of Friday morning is a source of much gratification to the Clyde workmen. Though the workmen have differences with the masters, they are jealous of their masters' reputation. They felt very sore over the breaking of the Louisitania's records by the Mauritania, though they never

doubted but that the former after a fair trial of her new screws, would again lead. Their faith has been justified and there is again hope that the Clyde will build the new Cunarder.

DOMINION COAL CO.'S OUTPUT INCREASING.

(Glace Bay Gazette.)

Many of the men on strike and a great many of the outside public actually believe that the Dominion Coal Company is making no progress in increasing the daily output from its collieries. Many of these men believe implicitly in the slogan of the U. M. W. leaders, 'wait till the banks are gone.' Others have become accustomed to reading the output figures as they are published daily in the Gazette that they do not notice the gradual but sure increase in the amount produced from the collieries day by day, and they think the strike is only marking time, neither side making much progress.

To take the output figures in groups or periods and make some comparison may be to convince some of these doubting Thomases that the Coal company is regularly increasing the amount taken from the mines.

A good way to make such comparisons is to take the pay day period, that is, pay day and the two days before, for one comparison and the first three working days following a pay, for another. As everybody knows these days usually give the lowest outputs of any in the month. Comparing these periods at the four pay-days since the strike began will show how the total output, as well as the average daily output has jumped up.

The pay-days since the strike began fell on July 17 and 31, and Aug. 14 and 28.

The total output from the mines for the three days ending with these dates was as follows:

July 17.....	12,683 tons.
July 31.....	16,653 "
Aug. 14.....	17,046 "
Aug. 28.....	20,191 "

The average daily output for the same three day periods jumped as follows:

July 17.....	4,227 tons.
July 31.....	5,547 "
Aug. 14.....	5,862 "
Aug. 28.....	6,730 "

On the first three working days following these pay days, the following amounts were produced from the mines:

July 19-21.....	14,046 tons
Aug. 2-4.....	15,623 "
Aug. 16-18.....	16,783 "
Aug. 30, Sept. 1.....	16,562 "

The latter three days did not show as large an increase, on account of No. 1 not having been working on August 31, which would account for a loss of about 1800 tons. Making an allowance of 1800 tons for that would bring the total output for those three days up to 18,362 tons.

The above figures show that the output has been increased by about sixty per cent. since the lowest level reached on July 8. The same constant and regular rate of increase can be kept up, and by the end of September there is every possibility that the average daily output from the mines will be double what it was at the middle of July and nearly as much as is

now being got from mines and banks altogether. These figures can prove pretty conclusively that the company is gaining all the time. Instead of the company having to worry about the time when the banks will be all filled away, if there is any worrying to be done it will be by the men who stay out until the average daily output reaches about nine thousand tons, and who then, with winter close at hand, go looking to get their work back, only to find that all the coal that can be sold for some months is already being produced:

TREASON.

What has happened in Nova Scotia? This has happened: Under the name of trades unionism every one of the protective barriers erected by our legislators against the encroachments of the United States has been swept away; a direct attack has been made upon our coal industry by alien strike leaders engaged and paid in the United States out of the funds of a United States corporation, and the result is that American coal is now being unloaded in Sydney harbor, while some three thousand Nova Scotia miners are idling on the streets of Glace Bay and Springhill. We have said that this has been done in the name of trades unionism, but in reality what has happened is tantamount to sedition and to treason, which has been fomented by alien enemies who have conspired against our trade and to destroy our native institutions. That these enemies of our country have been helped in their work of destruction by some misguided citizens of Canada may add to the irony of the situation, but does not minimize the menace.

The policy and the actions of the United Mine Workers of America in Nova Scotia have not been those of a legitimate trade union, but they have been predatory, and foolish withal, and are calculated to work great harm to the proper aims of trades unionism. It is not calculated to advance the interests of labor for a powerful union to embark upon a policy of extermination against a smaller one, and this is what the U. M. W. A. have done.—(Sydney Record.)

THE EVOLUTION OF LOCOMOTION.

In the space of a hundred years marvellous changes have been witnessed in modes of travelling in this country. Railway locomotion has made great strides since Hedley's 'Puffing Billy' started running at Wylam Colliery in 1813. Hedley designed and constructed three locomotives, and although these engines served their purpose well, the credit of constructing the most successful locomotive up to that time is conceded to George Stephenson who, on July 25th, 1814,—ninety-five years ago—placed the first engine of his own design on the Killingworth Colliery railway. It drew eight loaded waggons, weighing eighty tons, up a gradient at the rate of four miles an hour. 'Blucher' as this engine was called, and the passenger coaches that followed its invention, would look weird things alongside the mighty main line engine and carriages of to-day.—S. and A. of Mining.

AMERICAN COAL IN N. S.

American coal still continues to pour into Cape Breton, and, worst of all, a new order is being placed with the American coal barons for a further supply of sixty thousand tons for the Dominion Steel Co. This is "carrying coals to Newcastle" with a vengeance, and, by the way, is in complete accord with the wishes of certain American strike agitators. The first contract made by the Steel Company for one hundred and twenty thousand tons of soft coal with the Philadelphia operators is about half delivered, the arrival in port on Friday of the steamer Dominion with 6,800 tons, making a total of 30,800 tons of the 126,000 ton order. The additional 60,000 ton contract with the Philadelphia concern will place the big steel plant in a position whereby its interests will be safeguarded till spring, but which time it is expected the strike trouble will be a thing of the distant past, and, it is hoped, it will prove of sufficient significance to our local coal miners when questions involving the interest of themselves and the Cape Breton public. It is a sad commentary on the present unfortunate strike at Glace Bay.

Not only are the Americans making inroads into our principal industry right here in Cape Breton, but they are seeking to capture the Newfoundland trade. According to the St. John Telegram a local firm there that consumes a large quantity of coal each year had a cablegram from an American coal company last Saturday soliciting their year's order. It is now generally believed that the strike at Glace Bay had at the back of it the wire pulling of the American coal companies. They are most anxious to get hold of the Newfoundland coal trade, and this was their opportunity. Passengers arriving at St. Johns say that the U. S. coal companies are behind the U. M. W. and are most anxious to get the Newfoundland coal orders. The sending of a cable by a U. S. coal company Saturday seems to confirm this opinion.—North Sydney Herald.

BRIQUETTING N. S. COAL.

Referring to an article which appeared in the Record a few weeks ago in reference to the Devillers Briquetting machine, Mr. Devillers writes:—"As no doubt you are interested in the briquetting of the Nova Scotia coal, I take pleasure to inform you that I have succeeded to briquette into square briquette the reworked coal of the Dominion Iron & Steel Co. of Sydney C. B.

This reworked coal having been sent by the Dominion Co. to my European plant in June last for experimental purpose, contained 33 p. cent volatile matter and about 12 p. cent moisture. It arrived the latter part of July at my plant entirely dry, and to have the coal exactly the same as it is at the Dominion Co's works, after it is washed, I reworked it at my plant to obtain approximately the same moisture and have worked it with 16 p. cent. moisture, and have turned it into a square briquette which can be handled as soon as it comes out of the press and put in cars or in storage or in the fire without desintegrating.

The cost to manufacture the square briquette from the Nova Scotia coal will not exceed seventy cents per gross ton at the actual market value of the binder in

Nova Scotia.

These briquettes have the advantages of burning longer than the coal from which they are made, giving more heat and not requiring so much space for storage as it requires 36 c. f. to store one ton of loose coal and only 18 c. f. to store one ton of these briquettes.

It is the first time to my knowledge that soft coal having 33 p. c. volatile matter and 16 p. cent. of moisture has been briquetted successfully and there is no doubt that the Nova Scotia coal can be briquetted with a commercial success and will find a ready market for locomotives, factories and steamship companies. I trust this will interest your readers."

ELECTRICITY IN MINES.

The annual excursion of the Mining Institute of Scotland was held lately, when an opportunity was taken to visit a part of the works of the Lochgelly Iron and Coal Company, where an extensive electrical installation has recently been made at a cost of about £60,000. The company own ten pits, and the electricity is being generated in bulk at the Nellie Pit, near Lochgelly Railway Station. The attendance of members and associates numbered nearly 300, and great interest was manifested in the work of the Lochgelly Company. At a luncheon provided by the company, Mr. George Mitchell, one of the directors, presided. Mr. Robert M'Laren, Chief Inspector of Mines for the Eastern District of Scotland, remarked that the system which existed at Lochgelly was the first in Fife. Neither money nor brains had been spared to produce a satisfactory job, and personally he hoped the visitors would take some hints from what they had seen, and that if they had any old installation at their mines they would get rid of it and introduce something like that at Lochgelly. It must be recognized that many of the installations of comparatively recent date were already obsolete. The sooner the present state of matters was remedied the better would the coalmasters be able to keep their place in the mining industries of the world. The Lochgelly Company were cordially thanked for their courtesy and hospitality.

The Star:—"Mr. Alexander Johnson, former member of Parliament from Cape Breton, who was at the Windsor, reports that the strike at Glace Bay "is settling itself."

"There is nothing now to be done," said he, "but to wait for the end. The men are gradually breaking away from the United Mine Workers and coming back to work."

"Did Premier Murray intervene to negotiate for a settlement?" was asked.

"No," was Mr. Johnson's reply, "there was no need to negotiate; the strike is settling itself."

Mr. Johnson looks upon the victory of the company as a permanent one.

"The foreign organization had to be driven out sooner or later. It is being done so thoroughly, too, that they are not likely to ever come back again."

The strike will soon settle itself without outside interference.

AROUND THE COLLIERIES.

A further descent into the old Bye-pit works near the Foord pit corroborates previous statements that the old workings are in a wonderful state of preservation.

The Montreal Star, and other leading papers, on frequent days omit all reference to the Dominion Coal Co. which affords proof that the papers think the strike is past petering out.

And now it is stated that the old Foord pit will have to be pumped out so as to admit of further extensions and developments at the back mines, and perhaps also of the Allan Shafts.

The Pictou Collieries suffered some in August in their outputs owing to the frequent pic-nics drawing away the men. It is expected the men will soon begin to settle down to work.

Some of the foreigners who went to work in the Allan Shafts have been permitted to shift to the Vale. They had objections to the manner of entrance into their places, not being accustomed to it.

A party who visited Inverness during the strike fiasco was astonished at the physique of Belgian women. They were broad shouldered and all of a size and were 'terrors.' Their husbands were second fiddles only.

They marvel in the United States at having put seven thousand odd tons of coal into a steamer, at Newport B. and see coal being loaded at the Whitney pier, and get a genuine surprise.

The P. W. A. men at Inverness were not captured by the blandishments of the imported orators. The men of the P. W. A. and the management at Inverness are to be congratulated on the manner in which they handled the situation.

In the United States the colliery consumption of coal in the Anthracite regions is eight per cent of the total output, and in the bituminous mines two and a half per cent. These figures should make some of our N. S. operators sit up and think.

The U. M. W. spouters talk of the United Mine Workers as a great international association, solidly united in all its parts, the object of the leaders being the advancement of the members and not their own aggrandizement. Is that so? Last year there was a keen fight between Lewis and Walker for the presidency, the former winning by some 2000 votes only. Now there is another fight on. Wm. Greene, president of the State organization is now a candidate for the presidency of the whole organization. It is said he will have the support of the Mitchell faction. There are some in Nova Scotia who believe in the old assertion that a house divided against itself cannot stand, and yet into this house which gives indications of decay, have many of our Nova Scotia miners been inveigled.

An engine on the New York Central Ry. hauled a train of 108 loaded 50 ton coal cars, a distance of 103 miles in a little over eight hours. We can haul 'some' in C. B., but as yet there has been no attempt to haul a five thousand ton train of coal.

Senator McKeen, who is not so much in love with the Don, Coal Co., as in days of yore, is still unprejudiced enough to declare that the coal company is winning out, and that in the course of three or four weeks the strike will have collapsed, and as the Senator says so they all.

A writer in the Herald says that the support for a thousand families will average six to seven dollars per family per week, or say a total of \$6,500 per week from the funds of the U. M. W. These foreigners must be the most generous people on earth, as they never got much if any money from the men of Springhill. It will be awful hard to convince the public that this lavish generosity is for nothing.

It is anticipated that as a result of lowering the duty to twenty five cents a ton there will be increased imports of foreign ore to the United States. The Nova Scotia Steel and Coal Co. will likely be large shavers in next to the United States Steel Corporation they have the largest deposits of ore—presently worked—in the world.

Dr. Cook says there is plenty of coal at the North Pole. We are not alarmed. Transportation difficulties and the difficulties of removing mountains of ice in order to get at it, will render any attempt of the North Poiers to secure a footing in the Montreal markets impossible. Any little quantity that may find its way into Halifax will not help the grumblers of the Free Coal League.

The excuse of a number of miners who struck in one locality and shortly after went to work in another, is that the U. M. W. failed to make good. The ten dollars a week they expected, whether promised or not cannot be alirmed, was not forthcoming and they could not understand why they should be happy idle with five dollars, while the man at work was making fifty.

One of the Quebec papers has it that the output of the Maritime Ry. & Power Co. is 1500 tons a day and that the installation of endless haulage will double this output. Is this not going it a little strong. The Record is pleased indeed to note the progress of the Company, but exaggerated statements in the end can only lead to disappointment and to the rejection of honest statements. When the annual reports come to be published the public will be disappointed to find that the years results are not up to what the press led them to believe they would be. The Record is optimistic, but cannot at the same time see that any good comes of inflated statements.

AROUND THE COLLIERIES.

The operators individually and collectively are hopeful that the pic nic season will soon be declared off.

The coal shipments for August are not all in so we will publish July and August shipments next issue.

Six thousand six hundred and ninety two tons of coal were hoisted from the Dom. Coal Co's pits on Tuesday last.

A large number of new comers are arriving at Glace Bay to work in the mine. A hundred and eight arrived on Tuesday night.

At the Vale there is a pretty face of long wall some 2400 feet in extent. Some of the pieces of coal brought down weigh a ton and a half.

The Vale colliery has been put on double shift. The output is now 500 tons per day. There are lots of places there still waiting to be filled.

The new mine at Little Bras d'or expects to begin coal shipments the latter part of this month. About the time there should be a big demand for their product.

What everybody says must be true, and everybody and his brother are saying—and they use a word not found in an ordinary office dictionary—that the strike at Glace Bay is "peteing" out.

The North Atlantic Collieries Co. are increasing their output, which is now between four and five hundred tons per day. The company has two steamers freely employed. The output for the year will show a gratifying increase over 1908.

It is stated on the authority of a Pa. miner, now working for the Dominion Coal Co that a thousand miners and their families can be secured in Pa. by the Dominion Coal Co for the asking. In certain sections of the U. S. the pits do not average three days work per week.

The U. M. W. agitators in C. B. led us to believe that they had an eight hour day in the United States, and that one of the blessings(?) to be conferred on the C. B. miners was an eight hour day, as if the C. B. miners now worked a longer day. But Pres. Lewis does not claim they have an eight hour day in the United States. Speaking to a gathering of miners at Barnesboro Pres. Lewis said, "I will not be satisfied until we have an eight hour day, with five days work a week, because I desire to see the working men have five days a week for labor, one day for God, and one for humanity." Funny religion, that of Lewis. One day each, only, for God and humanity, and out of God's day would come American base ball and other brain racking games. Does one day for God mean a return to Pharisism?

The furnace of the Nova Scotia Steel & Coal Co. at Sydney Mines is doing fine work, turning out an average of 170 tons a day.

Thomas L. Lewis has issued a statement saying that he will be a candidate for re-election to the presidency of the U. M. W. next fall, and denying the reports that serious dissensions have grown up in the ranks of the organization since he has been in office.

The Nova Scotia Steel & Coal Co. did well in its shipments of coal in August which exceeded 91,000. Still better work it is expected will be done in Sept. The management look for shipments of a hundred thousand tons, by far the biggest shipments in the company's history.

One might think that owing to short shipments on the part of the Dominion Coal Co., and the entire stoppage of work at Springhill, the remaining collieries of the province would be rushed with orders. Curiously this is not the case. There is only a moderate demand for coal as yet.

The shipments of the Nova Scotia Steel & Coal Co. for July and August exceed those of the same two months of last year by 48,000 tons. This is going it some. September will add its quota of increase which is expected to reach over 40,000 tons. Whatever may be the case with the shares the shareholders should be buoyant.

Since 1903 Seaman Terris, one of the Springhill strike leaders, made the following wages:—

Year	Days Worked	Wages.
1903	266½	\$978 00
1904	260	968 00
1905	233	842 00
1906	228½	950 00
1907	169½	714 00
1908	225	763 00
1909	136	480 00
	1518½	5695 00

Equal to an average for the 7 years of \$3 75. How much more would Seaman Terrace want?

The fact that the Inverness Ry. & Coal Co. shipped 19,577 tons of coal in August furnishes convincing proof that the strike called there by the United Mine Workers was an ignominious failure, a miserable fiasco. The noisiest of those who came out on strike have gone to a locality where there is a strike, to be called there what they called the loyal workmen at Inverness. This gives an idea of the kind who constitute the membership of the foreign society. They are infinitely worse than 'scabs,' they are traitors. The time is coming round and coming soon when the Dominion Coal Co., whether in need of men or not, will have no place for a man who took any known part in the strike.

PROVINCIAL GAS COALS.

(Gaslight Journal)

The existence of the immense coal deposits of Nova Scotia and Cape Breton was first made known in a French work, published in 1672, by the then Governor of Cape Breton, Nicholas Denys. In 1654 that official was granted a concession by the French Government to 'Search for and work all mineral deposits of the island.'

Under this grant some trial shipments of coal were made to France, but no systematic efforts were made to develop these valuable deposits until about 1720, when the celebrated Fortress of Louisburg was being erected by the French government; the fuel necessary for the large force employed in this work was obtained from a coal seam on the north side of Cow Bay. In 1724 a vessel was reported as having 'loaded coal at Cow Bay for Boston,' but the bulk of the product for the next 50 years appears to have been limited to the wants of the Fort at Louisburg and an occasional shipment to Halifax.

In 1826 a lease was granted by George IV to the Duke of York for the working of all the mines and the Island of Cape Breton, which at that time included neither the means nor the ability to work the mines on his own account, he transferred the lease in 1827 to a company, which had recently been organized in London under the name of 'The General Mining Association.'

The only gas coals available to this association were those from the Albion mines, at Pictou, and the Lingan Mines in Cape Breton. As the latter were not operated until 1855, the Albion was the only Provincial gas coal obtainable prior to that date.

The records of the association give the annual shipments of this coal to the States, but as a large percentage of the quantity reported was used in iron manufacture and foundry purposes, it is difficult to form any reliable estimate of that which entered into the manufacture of gas. It was used in the Boston works in 1838, and continued to form part of their supplies from that time forward until 1875, when its use was abandoned by that company.

The same energetic, far-seeing business man, who had organized the first regular steamship line between Liverpool, Halifax and Boston, in 1840, the Hon. Samuel Cunard, was then at the head of the 'General Mining Association.' Visiting Boston in 1845, he placed the agency for the sale of the coals controlled by his company in the hands of James P. Melledge and Thomas Tremlett, two well known merchants of Boston; names familiar to the gas making fraternity of 50 years ago.

(To be continued.)

Literature is being distributed by persons connected with one of the Rhode Island coal mines advising the public that the profits on the coal will amount to \$1 a ton. This is a broad statement. Even if a profit of one-quarter the amount was to be had, operators from other States would gobble up the mine at almost any price. It is estimated that the output will be one thousand tons a day, but there is no statement made as to when this amount will be taken out daily.

The report of the Inspectors of Mines on the disastrous explosion at West Stanley Colliery, Durham, on February 16, by which 168 lives were lost, has been issued in the form of a Blue Book. Dealing with the original point, and possible cause of the explosion, it is stated that it appears fairly certain that a small initial explosion, or mere puff, was succeeded within about fifty seconds by a much more extensive and severe explosion, which did practically all the damage and which was projected from seam to seam. Where either of the explosions originated they are not prepared to say, but clearly it was not in the Tilley seam. The main explosion may have been initiated by an explosion of gas, but was undoubtedly propagated by coal dust. What the means of ignition were the inspectors cannot say. They add:—"We are anxious to emphasize the impression made upon us in investigating this and other explosions that unless the grave danger which exists at many collieries, owing to the presence of coal dust, is attacked with much greater earnestness in the future than it has been in the past, disasters of a similar character will occur from time to time." The report in conclusion says:—"It is gratifying to be able to state that throughout a long and exhaustive inquiry no breach of the Coal Mines Regulation Act or special rules was brought to light."

"You ought to go to Dr. Squills with that cough of yours. He'd put you right in a couple of days." "How much does he charge?" inquired the sufferer. "He charges two guineas for the first visit and five shillings afterwards," replied his friend. "Two guineas!" was the reply. "Too much. I can't afford it." However, on the way home he thought it over, and next day presented himself at Dr. Squills's. "Good morning doctor," he said; "I've come again about this cough of mine." "Good morning" replied the doctor; "I don't seem to remember your face. Is your cough any better now?" "It does seem a bit easier." By the way, doctor, how much do you charge me this time?" "Oh, the usual five shillings." The fee was handed over. The doctor put it in his pocket and continued, "Well, now, keep on taking the same medicine, and call again next week, you're getting on very well."

According to a Press report a safe lock has been invented, which is provided with phonographic mechanism so that it can be opened only by the voice of the owner. A mouth piece like that of a telephone takes the place of a knob on the door, and this is provided with the usual style or needle, which travels in a groove in the sound record of the phonograph cylinder. Before the safe can be unlocked the password must be spoken into the cylinder by the one who made the original record.

The Maritime Coal, Railway and Power Co. have let contracts to the Canadian General Electric Co. for a new unit to be installed in their powerhouse at Chignecto, N.S. This machine will add 750 h.p. to capacity of the generating station. The business of the Maritime Co. has increased to such an extent during the past 18 months as to necessitate the installation of this new machine. The power will be extended and the work will be rushed. The steam engine will be supplied by the Robb Engineering Co., and will be of the latest pattern.

Priestleys
Mohairs

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Lustres

Have Excellent
Wearing Qualities,

WILL NOT COOKLE
::: WITH RAIN :::

Best for
SPRING AND
SHIRT WAJ

All Ladies who wish to look well
wear **Priestleys Dress Goods**.
Greenshields Limited, Sole Agents,
Montreal, Canada

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. Reynolds, Halifax Representative—

Brick! Brick!

The Westellar Terra Cotta Company
having taken over the business of the Stellarton
Brick and Tile Co'y, and having installed more
powerful and modern machinery, WILL BE
PLEASED TO HAVE ENQUIRIES AS TO
PRICE AND QUALITY.

Works — SYLVESTER Head office — STELLARTON,
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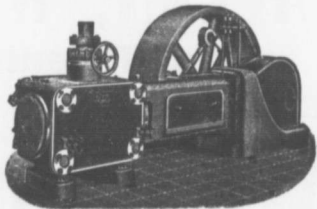
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ENGINES.

Corliss,
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Portable.

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AMHERST, N. S.

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Rutherglen, Glasgow, Scotland.Codes, A B C (4th & 5th Eds)
A. T., Liebers and Private.**Wire Ropes** for Winding & Haulage
in Collieries and Mines.
Aerial Ropeways, Suspension Bridges, etc. Specially
flexible for Ore & Coal Discharging Cranes, Winches, etc.The Nova Scotia Steel & Coal Co., Ltd., who use our Ropes largely, write that one of our
Haulage Ropes at Wabana Mines has been in service for over 5 years, drawing over 1,700,
000 tons in that time and is still good for further considerable service.

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Miners and Shippers of INVERNESS (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. 26, Taking effect at 1 a. m. OCT 11TH, 1908.

EASTBOUND		STATIONS.		WESTBOUND	
Read Down				Read Up	
No. 52	No. 54			No. 51	No. 53
a. m.	p. m.			a. m.	p. m.
L 10 45	L 2 20	P	TUPPER JUNCTION	A 1 55	A 3 35
S 10 45	S 2 20	P	PORT HAWKESBURY	S 10 27	S 3 3
A 11 10	A 4 00	P	PORT HASTINGS	L 10 57	L 3 10
	F 4 45	P	TROY	F 9 32	
	S 4 20	P	CREGGINISH	S 9 36	
	F 4 50	P	JUDIQUE	F 9 22	
	S 5 00	P	CRAIGMOIR	S 9 04	
	F 5 20	P	ATHERINES FORD	F 8 48	
	A 5 30	P	PORT HOOD	L 8 32	
	S 5 30	P	GLENCOR	A 8 27	
	N 6 16	P	MAROU	S 8 16	
	N 6 28	P	GLENYOKE	S 7 54	
	S 6 48	P	BLACK RIVER	F 7 55	
	S 7 02	P	STRATHLOINE	S 7 02	
	A 7 15	P	INVERNESS	L 6 45	
	p. m.			a. m.	

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

Coal miners generally believe that black is any mixture of gases which is heavier than air, non-explosive, extinguishes a lamp, and does not cause any noticeable effect on the miner when mixed with sufficient air to allow a lamp to burn. In investigating this subject it has been found that an atmosphere, which is extinctive to lamps, may be lighter than air. Such a condition may occur when the atmosphere is a mixture of nitrogen and carbon dioxide, in which the quantity of CO₂ is so small that the mixture is lighter than air. A similar condition will exist if the mixture contains less oxygen than is

necessary to support combustion, and a percentage of fire damp above the explosive limit.

Three torpedo-boat destroyers are to be built on the Clyde for the Australian Government, at a cost of £236,000. Twenty Australian artisans are being sent by the Commonwealth Government to take part in building them and to carry back to Australia the latest methods of naval construction.

North Atlantic Collieries, LIMITED.

Mines and Loading Piers, Port Morien, C. B.
Miners and Shippers of **Cow Bay Basin Coals.**

EXCELLENT FUEL FOR
**Domestic, Steamship
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Recent analysis of the coals in several of the seams in this Basin—which will be persistently developed—show them to be remarkably low in ash and sulphur. All modern appliances for Screening and picking, so that this coal can be shipped more than "reasonably free from stone and shale."

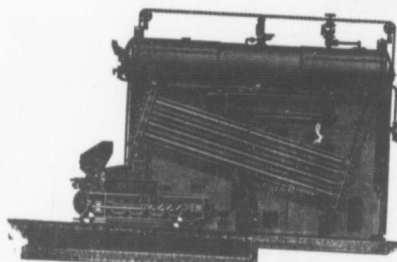
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SUPERHEATER and IMPROVED MECHANICAL STOKER.

Over 7,000,000 h. p. in use.

Also, Steam Superheaters,
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*Best all round flour on the market.
Uniform in quality. Every barrel*

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only be had in Cape Breton at the stores
of the Dominion Coal Company.*

**Air Compressors, Rock Drills,
Imperial Pneumatic Tools,
Air Appliances, Coal Cutters,
"EVERYTHING IN AIR MACHINERY."**

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ALL LOSS OR DAMAGE TO PROPERTY
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"REDSTONE SHEET PACKING,

For highest pressures with Steam, Hot or Cold Water and Air.
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**DELIVERED BY RAIL OR WATER,
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Quotations Furnished Promptly on Application.

**MARITIME COAL, RAILWAY,
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Miners and shippers of
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Endless Haulage Engines, Revolving Tipples, Picking Tables and Complete Screening Plants for the Cleaning and Picking of Coal. Rope Wheels, Pumps, Valves, Shafting, Belting Etc.

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From Coal Washed by Latest Process
Growing more popular daily—and considered to
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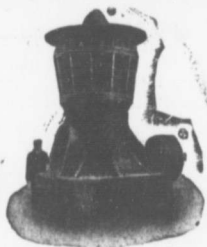
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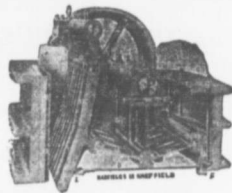
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Have always in Stock every size of their standard

TREBLE BEST SPECIAL CRANE CHAINS

Manufactured in their own Workshops by selected Workmen, under Strictest Supervision and every Link carefully Tested and Certificates Furnished.

Mine Cars, Drawbars and Hitchings a SPECIALTY.

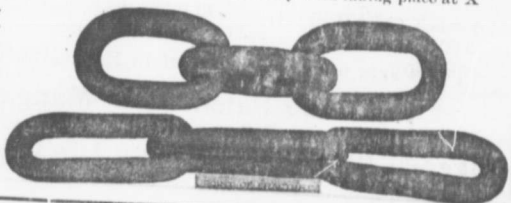
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Improved Type of Tram Hitching, consisting of Three Side-welded Links. The illustration shows one of these couplings before, and after, being tested on Lloyd's Public Machine. Made of 1½ dia. Iron. The centre link narrower to prevent buckling.

Broke at 57½ tons in the iron. The welds showed no sign of giving way.

X

The only weld taking place at X



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Gas Coal and Coal for Household Use

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'Emery,' 'Phalen,' 'Harbour,' 'Victoria' and 'Hub.'

12 Collieries
in Operation.

OUTPUT:
3,500,000 tons Yearly

Used by Railways, Tramways, Steamships, Manufacturers, Water Works, Light and Power Stations in Ontario, Quebec and the Maritime Provinces, also in Newfoundland and the New England States, Mexico, Sweden, South Africa and the West Indies.

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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
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BEST COAL FOR
GENERAL STEAM PURPOSES.

Delivered By Rail or Water

The year Round

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IN Lots To Suit Purchasers.

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