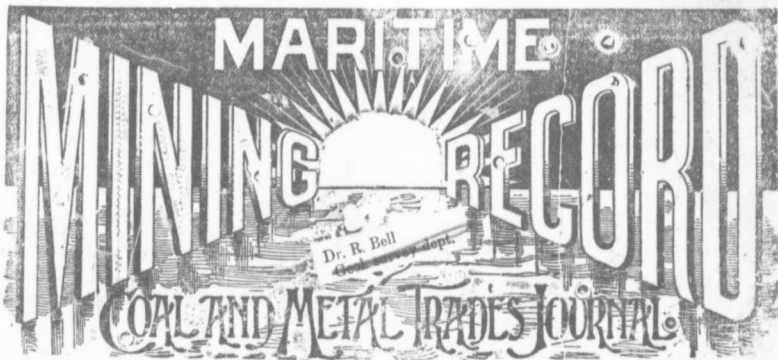


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New Series Vol. II No. 24 June 23rd. 1909

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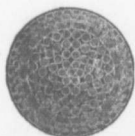
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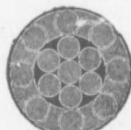
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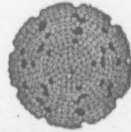
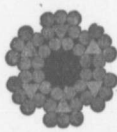
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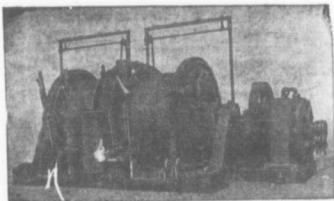
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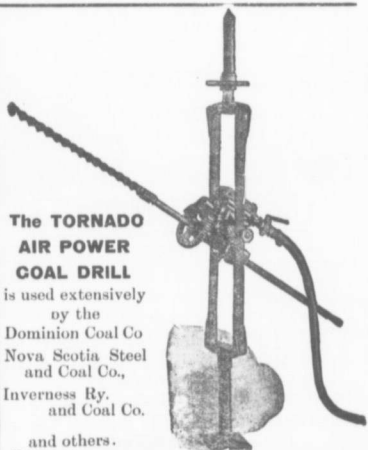
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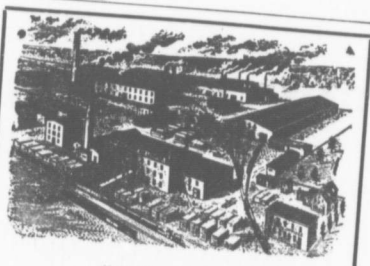


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No. 144 Mixed for Hopewell.....	5.55
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18 Mix. d for Hopewell.....	7.00
18 Express for Halifax, and St. John.....	7.40
21 Mixed for Pictou Landing.....	7.45
22 Mixed for Pictou.....	7.45
45 Mixed for Mulgrave.....	7.45
19 Express for Sydney.....	8.30
28 Mixed for Pictou.....	11.15
26 Mixed for Truro.....	11.15
102 M. and for New Glasgow.....	12.55
71 Express for Halifax and Montreal.....	13.10
140 Mixed for Pictou.....	13.15
161 Mixed for Pictou Landing.....	13.15
22 Mixed for Hopewell.....	13.55
61 Mixed for New Glasgow.....	16.45
17 Express for New Glasgow.....	18.15
60 Express for Pictou.....	21.00
21.50	21.55

— TRAINS ARRIVE AT STELLARTON. —

No. 79 Mixed from Hopewell.....	6.30
78 Mixed from Trenton.....	6.30
6 Express from Pictou.....	7.00
18 Express from New Glasgow.....	7.30
21 Mixed from Hopewell.....	7.35
28 Mixed from Truro.....	8.05
22 Mixed from Pictou.....	8.05
45 Mixed from Mulgrave.....	10.55
19 Express from Halifax and St. John.....	10.55
140 Mixed from Pictou.....	11.00
161 Express from Sydney.....	11.00
22 Mixed from Pictou Landing.....	13.05
71 Mixed from Hopewell.....	13.10
61 Mixed from Pictou.....	13.45
60 Express from New Glasgow.....	16.45
17 Express from St. John and Halifax.....	21.45

All trains are run by Atlantic Standard time Twenty-four hours notation. Twenty-four O'clock is midnight. (Mon., N. B., Dec. 31st, 1908.)  
 Sleeping and Dining Cars between Halifax and Sydney, on Nos. 19 and 20 trains.

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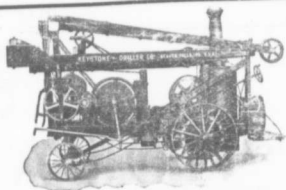
"Vitite" Packing resists highest steam pressure and superheated steam, and is unexcelled as a flange packing for Steam, Hydraulic, Gas Engine, Acid, Ammonia and other joints.

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**Percussion Core Drill Attachment**  
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**TESTING COAL LANDS.**

It can be used in connection with any good "churn" drill, but operates best on the long stroke KEYSTONE, thus making the cheapest and quickest method of boring to be found. In operation a hole is sunk to the coal with the ordinary Rock Bit. The Bit and Stem are then removed and the Coring Attachment put on in their place. It takes a 4 ft. core out of the Softest as well as the Hardest part of the vein. Avoids all the expense of "roils" water wash, diam. mill, shot, and heavy operating mechanism.

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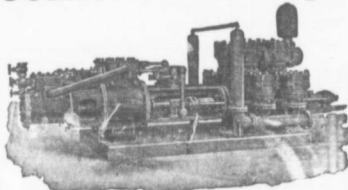
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**Minerals other than**  
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over five square miles for eighteen months, cost \$30.00; leases for four renewable terms of twenty years each can be selected from them at a cost of \$50.00, and are subject to an annual rental of \$30.00

All titles, transfers, etc., are recorded free of charge by the Department. The royalty on coal is 10 cents per long ton, and on other minerals in proportion.

The Gold District covers over three thousand square miles, and the deposits of coal iron ore, etc., are practically unlimited.

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Producers of High Class **SCREENED COAL, ROUND, RUN-MINE, SLACK.**

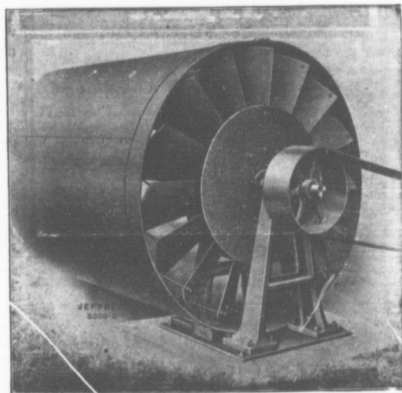
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This Fan is highly recommended wherever the development does not justify the installation of our centrifugal fan.

It has no equal for boosting along feeble currents in large operations.

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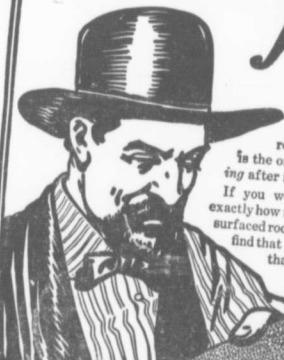
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SEND FOR A  
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IF you will write to-day for a free sample of Amatite, the end of your roofing troubles is in sight. It is the one roofing that needs no painting after it is once laid on the roof.

If you would sit down and figure out exactly how much it cost to paint a smooth surfaced roofing during its life, you would find that the cost of this paint is more than the roofing itself.

Amatite, on the other hand, has

a real mineral surface, and we sell the goods on the broad statement that it needs no painting of any kind.

The man who puts Amatite on his buildings is insured against leaks and trouble for many years to come.

Send name and address for a sample and booklet, which will prove conclusively how much better Amatite is than the old-fashioned "rubber roofings" which require constant painting and care to keep them tight.

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The  
Mark  
to Look  
For if  
You Want



Highest Grade  
Materials,  
Particular Workmanship,  
Greatest  
Efficiency  
in your **BOILER.**



at the Fraser mines in 1859 the practical result was about 60 gallons crude, and from 30 to 35 gallons fine clarified oil to the ton. A seam of oil coal was worked for two years about three miles to the east of Albion Mines. A specimen of oil coal having the much the appearance of the stellalite was sent to the Paris Exhibition, it was found, I believe, on the east side of East River. The oil coal has also been met with on the Montreal and Pictou area, on the northern edge of the basin. At some future time, therefore, great results may be expected from the working of this valuable material. The raising of the mineral was stopped on the discovery of the abundant supplies of mineral oil in the United States about 1860. The whole quantity sold from the two mines in operation was about 4000 tons, of the value of about \$8,35 per ton delivered at the place of shipment; some of this was sent to oil works in United States. Of course the stellalite is a most valuable gas material, it has been used by various establishments in these provinces to mix with bituminous coals for adding to the illuminating quality of the gas produced. Torbanite, or 'Boghead coal' has been, and is still probably, imported for the same purpose.

#### OIL SHALES OF ANTIGONISH COUNTY.

Up to the present time no attempt has been made to manufacture oil from shale, except in the case of that accompanying the Fraser oil coal, both of which were worked together I believe in the distillation of River district of Pictou County affording a product of Last year I observed an advertisement in Scotland, paper referring to a shale yielding about 30 gallons of shale to the ton for which offers were invited, and some I examined from East River gave about 33 gallons crude oil to the ton. The non-productive coal measures of Hants county afford large quantities of shale, which have led to expectations of finding coal, but the amount of oil they yield has not been ascertained. The deposits of shale in Antigonish County may be of the same age as these; these beds are very favourably spoken of by Mr. Campbell, from whose report I make a few extracts: "The fact that the cenozoic limestone overlying the oil coal and oil-shale of the Antigonish basin is occupied by highly bituminous devonian or lower carboniferous rocks which are per known in this country to contain coal beds of any value." On this point I may mention that in a depth of about 180 feet in the neighbourhood of Windsor on found one small seam of coal, some six inches thick, was in similar rocks to a considerable depth no coal was obtained. Mr Campbell goes on to say: "The bituminous beds appear to be divided into two groups, the lower of which appears to be about 70 or 80 feet in thickness, 20 feet of which may be regarded as good oil shale including five feet of curly cannel rich in oil. The upper band, which lies in immediate contact with the limestone, cannot be much short of 150 feet in vertical thickness of strata containing a large per centage of oil. Of this great bed of oil batt about 30 feet will in all probability yield from 20 to 25 gallons to the ton. The five feet seam of curly cannel will yield at least 40 gallons crude oil to the ton, and the fifteen feet of the best section of the oil-batt will yield at least

20 gallons to the ton, and taking this as worth 25 cents per gallon at the shipping port, there are in all \$370, 533,325 worth of oil which can be obtained from 20 ft. in thickness of strata underlying 2000 acres of land—out of 18000—comprising a basin underlain by at least 50 feet in thickness of beds rich in oil."

#### THE UNEARNED INCREMENT.

The seed sown by Henry George, has evidently, to some extent at least, taken root in the breast of Lloyd George. He proposes to tax unused land. He thus referred to the subject in his budget speech:—

The second proposal relating to land is the imposition of a tax on the capital value of all land which is not used to the best advantage. The owner of valuable land which is required or is likely in the near future to be required for building purposes, who contemplates to surate with an income therefrom wholly incommensurate with the capital value of the land in the hope of recouping himself ultimately in the shape of an increased price, is in a similar position to the investor in securities who reinvests the greater part of his dividends; but while the latter is required to pay income tax both upon the portion of the dividends enjoyed and also upon the portion of the dividends enjoyed and also upon the portion of the dividends enjoyed, the former escapes taxation upon his accumulating capital altogether, and this although the latter, by his self-denial, is increasing the wealth of the community, while the former by withholding from the market land which is required for housing or industry is creating a speculative inflation of values which is socially mischievous. We propose to redress this anomaly by charging an annual duty of a halfpenny in the £1 on the capital value of undeveloped land.

The same principle applies to ungoten mineral, which we propose similarly to tax at a halfpenny in the £1 calculated upon the price which the mining rights might be expected to realize if sold in open market at the date of valuation. The tax on undeveloped land will be charged upon unbuild-on land only, and all land of which the capital value does not exceed £50 an acre will be exempted, as also any land exceeding that value with respect to which it can be shown to the satisfaction of the Commissioners of Inland Revenue that no part of the value is due to the incapability of the land for use for building purposes. Under these provisions all land having a purely agricultural value will be exempt. Further exemptions will be made in favor of gardens and pleasure grounds and open spaces which are open to the public as of right, or to which reasonable access is granted to the public, where that access is recognized by the Commissioners of Inland Revenue as contributing to the amenity of the locality. Where undeveloped land forms part of a settled estate provision will be made to enable a limited owner who has not the full enjoyment of the land to charge the duty upon which the tax will be charged upon the corpus of the property. The valuation upon which the tax will be charged will be the value of land as a cleared site, deduction being allowed for any expenditure necessary to clear it, and likewise for any value attributable to works of permanent character executed by or on behalf of any person interested in the land, within a specified period of the date of valuation, for the purpose of fitting the land for building purposes.

## 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.

ST. LEONARD, N. S.

June 23

\*\*\*\*\*

## UNEMPLOYMENT INSURANCE.

Workmen may not have the same objections to compulsory insurance against sickness, accident, and unemployment, as some of them have to being compelled to pay to an old age pension scheme. Old age may be considered by many too remote to make any provision for it, while others say 'Why should we be compelled to contribute to a scheme from which we may never derive benefit; we may not live to be old'. This of course is a selfish way to look at it, but it is still human nature though this be the twentieth century of the Christian era. A pension in old age may be a fine thing for the aged but it does not appeal to the younger men other than something remote, misty, and intangible. Sickness, invalidity, and in Britain if not in Nova Scotia, unemployment, are visible virtues. They are continually met with, are felt because they are real, and so it may happen that the very persons who oppose contributions to a pension scheme may gladly contribute to a scheme which will ensure them against want should employment fail, or sickness overtake them. The proposed system of national insurance is, Mr. Churchill states, an essential corollary to the Labor Exchanges bill. The two systems are like man and wife, naturally supporting and sustaining one another. It is not practical at present to establish a system of universal insurance. The Government had, therefore, to decide between insuring some workmen in all trades and all workmen in some trades. In the first case there would be a voluntary and in the second case a compulsory system. A voluntary system, State subsidised, always attracted those men who were most likely to be unemployed, and for this reason all such systems had broken down. On the other hand, compulsory systems had broken down because of the refusal of the higher ranks of workers to assume, unsupported, the great burden of the weaker members of the community. The Government had decided to adopt the compulsory system, and their scheme would present these main features:

This would involve contributions from the workpeople and the employers, to which would be added a substantial subvention from the State. It would be insurance by trades, following the suggestion of the Royal Commission, and would be compulsory within those trades on all, unionists and non unionists, skilled and unskilled workmen and employers alike. The trades selected for a beginning were:

House building and works of construction. Engineering, machine and tool making. Ship and boat building, vehicles. Sawyers and general labourers working at those trades.

This group according to the census returns of the last ten years, comprised 2 250,000 of adult males, and roughly speaking, one-third of the total population of the United Kingdom engaged in purely industrial work, and it will cover very nearly one-half of the whole field of unemployment, and that the worst half.

It was necessary to raise something between 5d. and 6d. per man per week, and it was proposed to divide this not necessarily in equal proportions between the workmen, the employers, and the State. The German example would be followed of insurance cards or books, to which stamps would be fixed every week, and when a worker in an insured trade lost his employment, if he had kept to the rules of the system all he would have to do would be to take his card to the nearest Labor Exchange, which would be responsible, in conjunction with the insurance office, either for finding him a job or for paying his benefits.

After giving the above explanation of the proposed measure Mr. Churchill stated that the government could not touch the insurance question this year; they had not got the time now and they had not yet got the money.

## PRES. LEWIS IN PUBLIC AND PRIVATE.

From the fact that, in his public utterances, and more particularly in his 'dictated' statements, President Lewis was wholly on the side of peace, there are very many who declare that there shall be no stoppage of work or strike in Cape Breton. While there are many who think that there will be no strike, they do not base that opinion on Pres. Lewis' disclaimer of the U. M. W.'s being breeders of strife, nor on the further assertion that their preferences all the time are pacific, but rather on the ground that the men at the collieries of Cape Breton could not be guilty of so amazing a piece of folly. On the other hand there are not a few who express the opinion that there will be no stoppage of work and yet there will be a strike of the U. M. W.'s. The latter hope that they may be joined by the P. W. A. men, but in this they may be mistaken. There will be no strike of the U. M. W. if Pres. Lewis' public pacific declarations were ratified by him privately in the lodges. It is here that perplexity arises. There are those, seemingly well informed, who declare that in his public utterances one had no key to what was in Pres. Lewis' mind. They are ready to declare that while publicly he advocated peace privately he advised war. It is declared by some who say their information is correct that Pres. Lewis went back to Cape Breton, after his visit to Halifax, etc., and said: "It would never do for me to order a strike. I find there is a national prejudice against the recognition of the U. M. W. and if the 'International' President declared a strike the province would rise up and say 'Look, that Yankee has come in and incited our men to strike.' With public opinion running bitterly and strongly against us there would be no hope of success. It would be bad diplomacy on my part,

but I tell you what to do: You yourselves agree to strike and we will give you all the assistance necessary." As if to lend force to the assertion that the foregoing were the words used by Pres. Lewis in private it is further stated that pressure U. M. W. lodges to appoint delegates, to the convention called for the 29th., who shall have full the alternative to a strike if that is found to be out that the convention votes in favor of a strike then the public will be justified in coming to the conclusion that Pres. Lewis while here played a peace he was actually possibly plotting for war. Should a strike be declared, those who voted for best aid the united force of the United Mine Workers of America can give there is not the remotest possibility of the strikers being successful in their demands. The company is prepared as never a company was before for such a contingency. That the company will be loyally supported by the P. W. A. men may be taken for granted. They are, naturally, incensed against the fact that has to a considerable extent depleted their ranks and put their society to cost and inconvenience. A year ago the P. W. A. might have been neutral in any difference between the company and the U. M. W. That neutrality, by the action of the U. M. W's, has turned into pronounced hostility. We speak of one company only for the reason that there are too many P. W. A. men at Sydney Mines to make any strike possible. At Morien there are no U. M. W's.

#### ADDITIONS TO D. I. & S. CO'S. PLANT.

The report submitted at the annual meeting of the D. I. & Steel Co. contains the following references to enlargements:

"The improved financial condition of the company has enabled your directors to undertake some important additions to the plant at Sydney, which will add materially to its efficiency and earning power.

"The steel department and rolling mills are capable of producing and finishing a larger tonnage of steel than has hitherto been made, but their output has been limited by the amount of pig iron produced, which in turn has been limited by the output of coke obtainable with our present coke ovens. After full consideration it has been decided to erect additional coke ovens, another blast furnace, a finish mill for the manufacture of such materials as angle bars and standard heavy sections, and some subsidiary plants.

"When these additions are completed, the works will be capable of producing a much larger tonnage of finished steel than at present, and your directors hope, in due time, to see a marked improvement in costs and earnings as the result."

Despatches from Washington state that the Tariff Committee will reduce the duty on coal from about 67 to 50c. a ton. Nothing is said about slack which is the more important item so far as N. S. is concerned. The change in duty will have no appreciable effect on exportations of Canadian coal.

## - Rubs by Rambler.

A few weeks ago the editor, presumably, of the Eastern Chronicle, dedicated to the Mining Record a short article showing the large amount at which farms, farm buildings, implements etc. were appraised. The figures were dazzling, and taken at their face might seem for ever to settle the point as to farming being the backbone of this as of all the provinces of the Dominion. Following the custom of the country, a pernicious gift or a present, which is when one receives a time, reciprocate by returning a gift of equal or greater value, on the spur of the moment, and in token of good will I set about to dedicate to the editor of the E. C. an article showing approximately the number of mortgages on farm lands in this county. On second thought I concluded that might not look quite patriotic, and that even though the dedication was a mark of friendship, it might be construed unfavorably and evil spoken of, so I refrained. The other day I came across a statement which I may safely dedicate to my friend, seeing I am not the originator of it, and which serves my purpose capitally. Addressing the Royal Commission, appointed to enquire into assessments etc. in Cape Breton, Mr. D. A. Cameron, solicitor for the municipality, said:-

"The general assessor had been well within the mark when he had stated that not one farm was self sustaining. There was not in fact one farm in the county of Cape Breton worthy of the name. There are not fifty farms in the entire county upon which a man can make a decent and comfortable living. The proof of this is to be found in the very large quantities of agricultural products imported for consumption and even for seed purposes."

In comparison with the above statement of Mr. Cameron, anything the Record ever said in reference to farming in this province was laudatory. As the farmers' friend it seems that a plain duty of our friend of the Eastern Chronicle is to flail Cameron and scatter to the winds his chaff.

Being popularly supposed to be "void of art" no one would have imagined that it would be left to Gen'l Manager Cowans to bewitch President Lewis. And yet that is the operation which the U. M. W's of Springhill will be ready to declare Mr. Cowans performed on Mr. Lewis. Very many conjectures will be made as to how he managed it. That he did it and did it successfully is testified to by the following statement of Pres. Lewis:

"I have had an interview with Mr. Cowans. The basis of the whole trouble between you and me can be described in three words, "lack of confidence" between the men and the management. You distrust Mr. Cowans and he in his turn lacks confidence in you. While such a condition prevails there never can be harmony and peace. I am bound to say that I do not think all the fault was on the part of the management. I worked for twenty two years in coal mines, and know

something of the mining business, but I never met such a state of affairs as prevails in Springhill. I am informed that the company has 1600 employees of whom only 500 are cutters. The usual proportion in successfully operated mines is two thirds of coal cutters and one third of other workmen. In Springhill this condition was, is, reversed. No company can pay a living wage and pay expenses, with labor divided in such proportions. The amount of coal produced by the 500 miners is not sufficient to pay high wages to the other 1100 employees. I appeal to you to use your brains in dealing with the existing state of affairs."

It may be stated that the appeal had a marked and curious effect on the audience. Many hands involuntarily went up to heads as if searching for vacant spots, while many heads were dejected. The owners of these felt that there was rebuke in the appeal, a hint, if not an intimation, that brains on their part in the past had not been a conspicuous feature. It is hoped the appeal will produce good and the to be wished for results.

Pres. Lewis speaking of the alleged troubles at Springhill said, "The basis of the whole trouble can be subscribed in three words. 'Lack of confidence' between the men and management. The men distrusted Mr. Cowans and he in his turn lacked confidence in the." Ah, but Mr. Lewis made an omission. Besides lack of confidence between the management and the men there was lack of confidence between the men. The leaders, so called, in Springhill, had no confidence in the leaders of the P. W. A. The former imagined they could run things better. And what applies to Springhill applies to C. B. Certain men, those who were not leaders, could not trust, or did not want to trust, the men who were. Envy, jealousy and an over-weening conceit were at the bottom of the agitation against the P. W. A.

Surrounded as he was by blind guides it is not to be wondered at perhaps if Pres. Lewis at times fell into a ditch. On his visit to Halifax after his return from C. B. he, in his dictated statement spoke of the unsatisfactory conditions, which prevailed in the mining districts. Later he modified that opinion and said the men had no real grievances. That being so instead of being in an unsatisfactory condition things must really be the opposite of that. Pres. Lewis seems to have been surprised at the intelligence of the mine workers of Nova Scotia. Had he been in any way familiar with the fine character of work done by the P. W. A. during the past nigh thirty years, he would not have been the least bit surprised. Had he made close inquiry he would have found that the P. W. A. in its battle for the betterment of its members laid stress on the moral and intellectual as well as the merely material advancement of its members. And it ought not to be overlooked that Mr. Lewis saw only U. M. W. men, composed chiefly of disaffected, disgruntled, and former weary P. W. A. men. How very much greater would have been his surprise, had he seen the genuine article.

The miners of Scotland proposed to have a big demonstration in honor of the passage of the eight hour day. The proposal has been abandoned on

the ground that sufficient train accommodation could not be had. Perhaps there were other reasons for the abandonment. It may have occurred to some of the leaders that it was not a fitting time for a demonstration in view of the possibility of a big strike in South Wales as an outcome of the eight hour day law. If the miners leaders in several districts in Britain thought the masters would without demur pay ten hours pay for eight hours work they are beginning to realize that they may have been mistaken. Among others the South Wales operators contend that the eight hours act abrogates the Conciliation Board agreement and have served notices to that effect, on the workmen employed at the collieries. The notices expire on June 30th. In event of a failure to arrive at a settlement of the differences, a general stoppage, it is asserted, will occur. This will be a calamity as there are some 150,000 persons employed in the South Wales coal fields. Coal mining matters in Scotland are ominous. Mr. Smilie, a union leader in a statement in the Glasgow Mail, says there is less difficulty in arriving at the basis of wages than in the other conciliation board districts. He says:

"The 1888 basis is recognized as 4s. per day, and the present recognized nominal wage is 50 per cent. on this, or 6s. per day. In many parts of Ayrshire the nominal wage is considerably under this figure because of the fact that the basis of 1888 was lower, but on the general question this fact need not count at present. The first wages agreement entered into between the Scottish coal masters and the miners recognized 31½ per cent. on the 4s. basis as the minimum wage. This was 5s. 3d. per day. Under a new agreement this minimum was raised by agreement to 37½ per cent. on the 4s basis, or 5s 6d per day. Several conferences between the owners and workmen's delegates have been held to consider this question, but the coalmasters refused to agree to recognize the higher minimum. The workmen made up their minds some months ago to resist any further reduction below this point, and in this determination they are supported by the Miners' Federation of Great Britain. Some weeks ago the Scottish mineowners requested a meeting of the Joint Wages Board to consider a claim put forward by them for a reduction of 12½ per cent. in wages and since then two meetings have been held, at both of which the representatives of the men refused to grant any further reduction. This has led to a deadlock, and as the board have no arrangement to meet again the next move will lie with the coalmasters, who are to meet on an early date to consider the whole matter. The situation created is rather an unfortunate one, and it would be unwise to prophecy what the outcome may be.

It cannot be denied that Lloyd George and Winston Churchill are as the Americans say 'making good.' They are brave and bold spirits, co-partners and co-workers in the interest of society in general. First came George with his pension scheme, now comes Churchill with his system of Labor Exchanges and his proposed scheme of compulsory insurance. The Asquith government is no time server. Its first care is not to catch votes. It is not cowardly else it would not have dared to tackle the 'trade.' Some govern-

ments put forward only measures which may add to their popularity. If the present Liberal British government were possessed of that spirit, the Asquith government never have seen the light. Right regardless of consequences, Mr. Churchill, declared his readiness, lately, in Manchester, of national insurance even if it were a little unpopular at first and involved a temporary exclusion of power. That touch of the old heroic spirit was not felt on the instant. But when the great audience realised what the speaker meant, that here was a work worth doing at all costs, and without thought of whether it would gain or lose votes, they rose and cheered like men possessed. It was perhaps the most inspiring moment in the meeting.

Mark Workman who is the biggest holder of Dominion Steel stock says the company has equity, on ore of the Nova Scotia Steel & Coal Co. ore body alone is 10 to 20 times more than Mr. Drummond in his letter to the Star a few months ago figured it out to be. The great pity of it is that the Nova Scotia Steel company have not a man like Mr. Workman to give "Scotia" a boost. Scotia shares would be considered by the public invaluable if among the N. S. S. directors there was one with half the imagination of Mr. Workman. It is said an imaginative person can never be a bigot for he can imagine what he might do if in the other's place. Mr. Workman can size up the situation admirably for he can put himself in the ore body's place.

It is safe to say that no previous British budget has caused so much criticism, as this of Lloyd George. It is called many hard names, such as the robber budget. It has also, sympathetically been called the poor mans budget. It may be as some declare a Dreadnaught budget, but it is at the same time a Social Reform budget. Were it not for the Old Age Pension scheme, and the proposed system of Labor Exchanges and the government would not require to make provisions for so heavy an expenditure. As time moves on the 'social' aspects of the budget will be more clearly recognized and win the approval of the masses, though the classes may still look upon the whole budget as wholesale robbery.

It has not come as yet to this in C. B. :-  
"The Lisbon papers a few days ago published details of an extraordinary tragedy which occurred in a mine at Arrada, in Spain. It appears that sixty miners, belonging in almost equal numbers to two rival workmen's associations, entered into a hot dispute with regard to labor questions. The quarrel speedily developed into a free fight. Whilst the struggle was in progress one of the combatants, who was a shot-firer, accidentally dropped a dynamite cartridge, which exploded with such violence that the roof and walls of the mine collapsed and buried the whole of the men. A rescue party succeeded in getting out five of the men alive."

#### THE NOVA SCOTIA EASTERN RAILWAY.

The Dartmouth Patriot's Hopeful View.

Again an attempt is being made to construct what is generally known as the Musquodoboit Railway. A number of New York capitalists in company with J. B. Bertram of Toronto and A. K. Kirkpatrick of Kingston, Ontario, have been here and have had a number of interviews with the government, respecting the building of the road.

The Patriot has not been able to ascertain the exact status of affairs or how far negotiations have proceeded, but those who claim to be in a position to know say the deal will certainly be consummated within a reasonable time.

There is no doubt Premier Murray is putting forth every reasonable effort to implement his promise made some time since to build the road. The financial stringency which struck America some two years ago, made it impossible at this time to make headway. Money could not be secured except at tremendous cost and the time was altogether unfavorable for the floating of large undertakings involving as this does, several millions of dollars. Now, however, conditions are much more favorable. For some time Premier Murray has been giving a large share of his time to the building of this road, with excellent prospects of success.

It is understood that the belief is held among railway men, that there will not be sufficient local traffic along the line to pay operating expenses, unless the traffic is supplemented with the addition of important local industries to be established. These are to be included in the undertaking. It is well known that it is one thing to build a road, but another thing to have it successfully operated. There must be sufficient traffic in sight or to be created to pay operating expenses, or a road will never be built. Therein is the difficulty in the present case. Industries have to be created to provide the necessary traffic. The present arrangement provides for that contingent. If therefore the road is built the undertaking will mean a great deal to the county, for it will mean a vast increase in industrial activity along several lines.

A number of industries will be started. Water powers, now dormant, will be developed and industrial concerns will be started at various points along the line. This in brief is the general outline of what is proposed.

It is understood, the gentlemen who were here, not only from the United States and Ontario, but from Montreal together with local men of wealth, are well satisfied with the proposals placed before them, and it is hoped that a contract will be signed in the course of a few days or weeks at the longest. It is to be hoped in the interests of the county and Dartmouth that the outcome will be what all hope, and that the railway will soon be under construction.

Mr. Richardson, manager of the North Atlantic Collieries Co., paid a visit to Dom. No. Colliery. He was impressed greatly by all that he saw, but particularly was he surprised and delighted at the appearance of the Phelan seam. The Phelan is a flameless seam in his opinion, good pavement, good coal from top to bottom, free from faults,



## THE OTTAWA WATERWAY.

(Evening Journal, Ottawa.)

It is worth recalling the fact that the project of a navigable waterway from Montreal to Georgian Bay by way of the Ottawa river has been before the people for many years. Every one who knows anything of the history of transportation in Canada knows that the Ottawa route to the Huron country was in use by the Indians before the advent of Champlain. Not to labor the argument for the construction of the waterway, a glance at the map shows that the Ottawa route is the bee-line by water, so to say. It is remarked by the maritime Mining Record that as long ago as the inauguration of the National Policy, and that was in the seventies, Sir Charles Tupper held out the hope that by means of the duty Nova Scotia would be able to secure Ontario as a market for her coal. "The hopes have never been realized," says the Record, "wholly, it may be said, because of lack of transportation facilities. Coal cannot be sent to Ontario points without rehandling and reshipping at Montreal, and these are fatal to the 'looks' of Nova Scotia coal, and by looks chiefly are all coals commonly judged. The construction and operation of the Georgian Bay canal would enable Nova Scotia operators to send coal into the very heart of the Dominion. The government lately intimated that it could not proceed with the work at present for lack of funds. Sir Robert Perks, a great engineer, construction contractor, has, it is understood, offered to construct the canal with government encouragement. This should not be withheld. The Boards of Trade of the Ottawa Valley have taken action, and these should be backed up by all the Boards of Trade in this province. The Georgian Bay Canal, with a sufficient depth of water, will probably prove of more value to Nova Scotia than the building of the G. T. P. Railway."

The secretary of the Canadian Federation of Boards of Trade and Municipalities, Mr. A. J. Forward, publishes messages from municipal authorities and Board of Trade officials in a wide area. These messages express an unanimous approval of the project. From St. John, (New Brunswick), Caledonia, (Nova Scotia), Quebec, Three Rivers, Drummondville, Rouville, Lachute, (Quebec), Bruce Mines, Bonfield, Clinton, Sudbury, Callender, Sanlt Ste Marie, Haileybury, Fort William Port Arthur, Kenora (Ontario), Neepawa, St. Boniface Killarney (Manitoba), and Calgary (Alberta), come declarations of approval. The projected Ottawa waterway is described in these messages as a national enterprise which must benefit the whole country. In the West the opinion is that it would bring about cheaper transportation of Western products. In the East it is recognized as a plan having the possibilities of an immense development of trade through Canadian outports.

Meantime the project, which has been obliged to stand for many years, is still obliged to stand. Sir Robert Perks has, it is true, published the proposal that the French River end of the work, which would bring lake traffic to North Bay, should be begun at once. There is evidence everywhere that the financial stringency of the last two years is passing, and it is permitted to us to hope that during the current fiscal year the Dominion revenues will have so much improved that the Dominion Government may be able to give serious attention to the growing demand for the opening up of the Ottawa waterway.

## TUNNELING BY MACHINE.

The idea of a machine for cutting rock tunnels without drilling or blasting is no new thing. We are told by Rowland A. Phillips, in The Scientific American, that since 1853 no less than sixty-nine patents have been granted on such machines. Only three have ever been constructed, however, and the latest, the rotary machine invented by Mr. Sigafos, of Denver, Col., bids fair to be successful. A full-sized machine has been working in Georgetown, Col., since January last. Says Mr. Phillips in the article just mentioned:

"The machine complete, ready for work, weighs 29 tons, and its length is slightly in excess of 18 feet. This huge frame holds 10 crushing-heads, each carried on a 4 inch horizontal shaft and working on the same principle as a stamp mill, with the exception that the blows are given with the aid of springs instead of force of gravity. The entire fore part of the machine revolves as it cuts, thus cutting a full, clean bore, all the muck being flushed from the tunnel by means of a three inch stream of water, carried directly through the machine under 40 pounds pressure, and fed through 10 small nozzles, each of which sends a stream beside each crushing head. This constant revolution of the machine is its strong point, the body being run on a series of 'foot' wheels, 32 in all. The axles of these wheels—they are set in pairs—are arranged so they may be set at will, preventing the wheels from tracking. A simple twist sets them at an angle, and thus the whole machine moves forward or backward not unlike a huge screw.

"The ends of the cutter shafts carry tappets, which, as they revolve, are acted upon by a 5 foot cam. This draws back the tappets and releases them. In relation to the hardness of the rock these blows can be regulated and the drop varied from 4 to 12 inches by substituting other sized cams.

"Of these monster crushing heads there are 10, 8 on the outside of the revolving front and 2 in the center. The cam has a long barrel-like hub, which permits the centre shafts being brought back without interfering with the others. Diametrically opposite cutters strike at the same time. The springs which lend the force to the blows are 5 feet long, 6 inches in diameter, and composed of a specially chilled inch steel. These cutting or crushing-heads, as they should be called—for the machine works on the principle of pulverizing the rock instead of cutting it—are 2 feet in diameter, the face of each being composed of a series of blunt teeth. These heads revolve about the axis of the machine as they strike, thus producing a grinding motion to the surface of the breast. In this one respect alone the rotary differs from all its competitors, and in doing so proves the wisdom of the method. Mr. Sigafos has always maintained that a sharp or edged tool is worthless in tunnel work.

"With an 8-inch drop these heads strike a blow of 4,000 pounds, 200 times a minute. This means that a total of 8,000 pounds is expended against the breast of the tunnel every 60 seconds. It is claimed that if each head penetrates but the thickness of a sheet of common writing paper at a blow, it will cut it at the rate of an inch a minute.

"In fact, the harder and more stubborn the rock, the more easily the machine will do the work, and it is doubtful if it would work at all in soft dirt or clay."

It is calculated that 24 hours' work with the machine, during which it will cut a distance of 120 feet, will cost in wages about \$24, whereas three shifts of 4 men each, costing \$65 in wages, besides as much more for powder,

fuse, and timbering, would cut in the same time about 12 feet. The immediate uses to which this machine can be put to work are innumerable. Subways that formerly took five years to construct can now be run for half the expense in one-tenth the time. Water in unlimited quantities can be brought through the mountain walls, and the vast arid areas of the deserts will be made to blossom as a wonderful garden.

#### A NEW ILLUMINANT.

A new system of illumination based on the same principle as that generally used in railway car lighting has been recently introduced in Germany under the name of 'blau (blue) gas.' The gas is delivered in liquid form, in such shape that it may be used in closed rooms in hanging burners giving from 50 to 1,000 candle power. To use the gas, all that is necessary is to pour the liquid from the steel cylinders, in which it is delivered, into the gasometer. This is almost as convenient as having ones own gas plant, for one can protect himself against accidents at the factory, or delays in transit by always having on hand several filled cylinders. A cylinder contains 22 pounds of the gas, and costs about \$2.86. This quantity will supply a 50 candle power burner for 480 hours, so that this illuminant appears to be cheaper than petroleum. This 'blue gas' can, of course, be used for heating and cooking as well as for forging, hardening, and tempering, and other industrial processes. It is a hydro-carbon compound, free from carbon-monoxide, and is not poisonous; its heating effect is 3½ times that of ordinary coal gas. The gas is burned at a pressure of about 1 inch of mercury, or 13.6 inches of water at the burner. Almost any apparatus that is arranged to burn ordinary coal gas or acetylene gas can be altered without much difficulty to burn this; and in such cases all that is necessary is to make the connection between the cylinder and the house pipes through a reducing valve. As regards its explosibility, Prof. Gotz, of Augsburg, reports that, while the range of explosibility of acetylene gas when mixed with air is between 2 and 49 per cent. (a range of 47 per cent.), and that of ordinary coal gas is between 6½ and 19½ per cent. (a range of 13 per cent.), that of 'blue gas' is only between 4 and 8 per cent. (a range of 4 per cent.) No special permission from the authorities or the insurance companies is necessary for its use.

Officials of the U. M. W. in the anthracite region have a hard time of it in keeping alive the interest of the members. This they must do or there will be short pays for them. They are directing a large share of their efforts to the formulation of a plan for keeping their in the union. Following the settlement of three years ago the membership, which at that time numbered 90,000 declined rapidly until last fall there were only some 30,000 men in the three districts who had their dues paid up and were in good standing. At present there are about 75,000 enrolled, according to official figures, and having failed to get the check-off written into the recent agreement, the leaders are trying to devise some other effective method for avoiding a depletion of the ranks such as has marked periods of tranquility in the past. It is heard on all sides, and he was confident that the present season would prove one of widespread prosperity.

#### COAL MINERS AND THEIR WAGES

Coal miners use many strange methods for determining the amount of their earnings. In one colliery for instance the hewer will 'rax' his cutting, the word 'rax' meaning to extend one's arms and body to their fullest extent as a man does when he stretches himself on first awakening from his sleep. What, therefore, the collier does, is to stick out his arms horizontally to their fullest extent along one side of the seam of coal he is cutting, the length so measured off, and known as a 'bit' counting for so much cash on paying out day. The Staffordshire miner bases his wages on a fixed minimum quantity of work performed in a variable period of time known as a 'holer's day.' Thus supposing in a certain colliery a holer's day's work is thirty-five cubic feet of coal hewn, then as soon as he has finished getting this amount he is working over or 70 per cent the nominal amount of his wage. Amongst the Scottish miners, again, the minimum day's output of a hewer is termed a 'darg' and all he hews extra is paid for at extra rates.—Advertiser.

The new screening and picking plant at Sydney No. 5 is one of the most compact and serviceable possible. The building containing the picking tables is not large, but it is sufficient for every practical purpose. There are two picking tables. When screened coal is being made one of the tables is employed for round coal and the other for house coal which is coal free from all dust and of about egg size. The coal coming from all dust large and very free from stone. At most tables the coal is delivered into the waggon at the side; here they are loaded lengthways and it is an improvement. The apertures at the end of the tables are long, and are lowered when the empty wagon is run in—this to prevent breakage—and hoisted gradually as the wagon fills. Near the mouth of the egg or house coal table there is a 'stopper' which prevents the coal rushing too quickly on to the table. Ten feet more or less from the stopper is a 'turner'. This consists of three iron plates in line, V shaped to a plate. The coal before coming to these plates has been picked, and the object of the turners is to turn over the coals so that any pieces of stone that may have been overlooked may be exposed after the coal has been turned over. Without exaggeration No. 5 is a snug little colliery, taken all in all, of which the management may well be proud, even though it be bare of modern flim flams.

In the year 1650, at a colliery in North Wales, the general plan was to employ a man to enter the mine and fire the gas before the miners went to work. This man, who was called a "fireman," was dressed heavily, with his outer clothes thoroughly soaked in water. He carried a candle on which a naked lamp was fixed; when a doubtful or dangerous place in the mine was reached, he would lay down on the floor, or in a ditch, and then raise his candle to the roof and fire the gas. The historian states further that the fireman was seldom hurt. If the plan followed in 1650 were to be adopted at some of our gaseous mines today, it is probable there would be a great scarcity of firemen.

## AROUND THE COLLIERIES.

The number of men on the pay roll of the N. S. S. & Coal Co., Sydney Mines—coal mining department—is say 2200 against 1950 last year.

The new No. 4 mine of the Nova Scotia Steel & Coal Co., is producing at the rate of 300 tons per day, soon to be increased to close on 500 tons.

Up to date the North Atlantic Collieries Co. has shipped close on 25,000 tons of coal. The I. C. R. is not yet in a position to take any of the quantity contracted for.

Mr. Arch. Ferguson, formerly manager at New Campbellton is now manager of Sydney No. 2. His underground manager is Michael Muir, formerly of the Marsh mine.

They have a big sumpt in Dom. No. 6. It is not of the ordinary kind, rather a dam or a reservoir capable of holding about ten days' water, or say not far from three million gallons.

Contract work is largely in vogue at Dom. No. 6. Not only are the miners, loaders and shot firers on contract, but the pit drivers, cage runners, landing tenders, donkey engine drivers etc.

About sixteen per cent. of the men are off work after pay days at a number of the collieries on the Island. At some works, of course, the per centage is greater and at others, less. Voluntary unemployment.

A new fan is being erected at Sydney No. 4. The fan is a Sirroco—very fast running—(capable of producing about 200,000 feet of air per minute. The fan is 54 inch, and engine 13 x 12, both built by the Robb Engineering Co., Amherst.

Dominion No. 6 for a time had much trouble in getting clear of the pit water owing to the big pump betraying a desire to go to pieces. It got drowned for its pains. Two other pumps were requisitioned and the water is now being rapidly lowered.

The No. 2 mine of the N. S. S. & Coal Co.—the mine that was idle for a few years previous to 1909—is now producing about 400 tons per day. As this is a comparatively easy mine to work there should not be much difficulty in securing an output of 500 tons daily.

The longwall system of coal getting is not turning out so successfully in Nova Scotia as its advocates expected. The system was tried at Sydney No. 4 and abandoned; it has also been abandoned at Dominion No. 6, where the bord and pillar system takes its place. A good deal depends upon the nature of the roof as well as the height of the seam. At the Emery conditions may be favorable whereas in some other seams of similar height they may be unfavorable. Of the longwall system it may be said 'it all depends'—

Mr. Robt. Robertson, formerly of Dom. No. 6 and No. 9, is now manager of Sydney No. 5. This is an old mine, but Mr. Robertson is making a new one out of it.

The big new Corliss haulage engine at Dom. No. 6 is doing splendidly. Last year with two ropes, one for the full and the other for the empty boxes, fourteen boxes only were hoisted on a trip; with the new engine eighteen boxes are hoisted with one rope in use.

The several pits of the Nova Scotia Steel & Coal Co. are expected to be good for say 75,000 tons per month for the remainder of the season. About fifteen or say even twenty thousand tons per month should come from the bank, making the monthly shipments ninety to ninety-five thousand tons.

The membership of the P. W. A. is rapidly increasing at Dom. No. 3. In February last all that the P. W. A. could muster at its meetings was about thirty members; the lodge is now over 130 strong. Persons who ought to know say the P. W. A. is every bit as strong numerically as the U. M. W. in this stronghold of the latter.

On Monday, 15th. inst. the Nova Scotia Steel and Coal Co. broke all records in shipments of coal from their pier at North Sydney. On that day eight thousand tons were shipped. Shipments at this rate will soon overtake the decreases of the past few months and put the shipments where they should be—ahead of any for a previous given period.

Mr. John Johnstone, formerly of Mabou, is now in charge of Sydney No. 4—the new mine of the N. S. S. and Coal Co. The longwall system at first adopted has been replaced by bord and pillar. A section of the pit will be reserved for experimental longwall. It perhaps cannot be said the longwall has been an unqualified success where attempted in N. S. if two or three mines be excepted.

Dom. No. 6, made famous in the Steel Coat suit, is doing better than ever. With only one rope this year, as against two last year; and with about 280 men against 340 last year, the output has suffered no diminution, rather has increased. The output compares favorably with most of the other mines of the company, more especially when the lower height of the coal and other drawbacks are taken into consideration.

Until the visit of Pres. Lewis the men at No. 6 worked remarkably steady. After Mr. Lewis' visit there was a marked falling off in regularity. The men it is presumed lost nerve when they learned that Mr. Lewis would not call a strike. They had looked forward to a gala time in July. A strike at No. 6 would surely be a terrible calamity. It might mean a shut down for an indefinite period.

# AROUND THE COLLIERIES.

The output per man employed—not per miner—at the several collieries of the Dom. Coal Co. is remarkably close. The average per man is from three and a third to three and two thirds tons a day. For instance take Dom. No. 6. The average here is 3 1-2 tons a man a day. At Dom. No. 1 giving an output of 2400 tons for 600 men, the average is as near the same as at No. 6 as can well be.

Though there is not now on the Dominion Coal Cos. staff at Glace Bay, any higher paid man than the Gen'l Manager, the collieries were never in better condition than at the present, and the costs are nearer what they should be than for years. This is an endorsement of the Records opinion that the best man to manage is the Gen'l Manager. The official staff with Mr. Duggan as chief is now as near perfect as can be and the "esprit de corps" all that can be deserved. It is that latter that tells.

It is said that, at a U. M. W. lodge in Sydney Mines, when the voting for treasurer, etc. for the district local took place, only 80 members out of the hundreds and hundreds said to belong to the lodge were eligible to cast ballots. And it is said a similar thing might be found in the other U. M. W. lodges if rules were enforced. A majority of the members of the U. M. W. in C. B. may be classified as 'charity' members. The U. M. W.'s must be solicitous indeed to have a big nominal membership when such a state of affairs is tolerated.

Dom. No. 3 whose demise was predicted for about this time keeps on the even tenor of its way, and apparently is good for a half score years more of life. The colliery maintains a steady average output of 1450 tons a day, which is as good as last year. Mr. M. McInnis the Superintendent takes great pride in his colliery, and a big interest in the workers. The genial Superintendent was absent when the writer of this item called and therefore no reliable information could be obtained as to the growth, in population, of No. 3.

Dominion No. 3 is the one colliery of the Dominion Coal Co. double shifted. That it is double shifted is due to the generosity of the Dominion Coal Co., notwithstanding the fact that the Free Coal League, and a few others of that ilk call it a 'soulless' corporation and other repulsive names. To the members of the Conciliation Board Mr. Duggan gave a promise that he would find work for a number of men who were unemployed. In order to keep his promise it was necessary to put No. 3 double shifted. This generosity on the part of Mr. Duggan and the company is lost on a portion of the men who still cling to that false god, the U. M. W.

Mr. M. Pearl, the managing director of the Canadian Consolidated Coal Co. paid a flying visit to Port Malcolm, on Saturday, accompanied by Mr. Leslie of Philadelphia who is interested in the company. We understand the boring operations will be continued. Mr. Pearl is still confident that a great basin of coal of a superior quality exists on his areas. If he locates various seams that crop up at Port Malcolm, Port Richmond, Mac Island and Basin River Inhabitants, and finds them at an easy angle discovering the basin he will be well repaid for his faith in the property and for his persist efforts in prospecting for years for the so far elusive basin.—E. Journal.

The output of the North Atlantic Collieries Co'y. averages about 375 tons per day. Notwithstanding the great outcry about Norwegian steamers taking the trade away from Nova Scotia coasters, there is great difficulty in getting schooners to carry coal at reasonable rates. Schooner owners are saucy about carrying coal from Morien to Halifax at \$1.00 a ton or thereabouts. When Halifax people denounce the coal companies for overcharging the people of that city do not take into consideration the fact that coal in steamers can be carried 800 miles to Montreal at a very much less rate than it can be carried to Halifax.

The annual conference of the National Federation of Colliery Enginemen's and Boilermen's Protection Association was held at Glasgow. Mr. W. B. Charlton, of Durham, the President, was in the chair. Referring to the possibilities of a strike amongst the miners as the result of the eight hour bill, Mr. Charlton said that there was a sentiment amongst them which claimed that loyalty and comradeship dictated stopping with the miners as a duty. Experience helped him in that matter, and they would, he felt sure, credit him with honest conviction when he said that to refuse to attend the engines and boilers necessary for the proper keeping of the ham in 1892, would be barbarous and suicidal. There were seams of coal in Durham county flooded then that had not been reached since, and many others could not be reached for months after the settlement. Thus thousands of workmen, after having suffered the privations of a thirteen weeks' strike, had their sufferings intensified by many weeks' of further enforced idleness, other dangers and liabilities were created which did not aid their cause or help in the contest. This he hoped would not be repeated. They ought to keep the highway to the mines open, keep the water out, and the ventilation good, safe, and ready, but beyond this nothing ought to be done.

The president of the Scottish Trades Union Congress, in his annual address expressed the opinion that "the days of industrial strife were passing and that a better era was coming." Strife is wasteful.

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Have Excellent  
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WILL NOT COCKLE  
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**BULL DOG TOBACCO,**

Because it is the only Tobacco  
which does not excite **Thirst**  
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—W. B. Reynolds, Halifax Representative—

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GEO. E. MUNRO, Sec'y, WESTVILLE, N. S.

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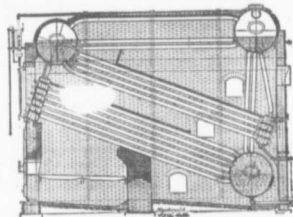
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Aerial Ropeways, Suspension Bridges, etc. Specially  
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Haulage Ropes at Wabana Mines has been in service for over 5 years, drawing over 1,700,  
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**WIRE "DOMINION" ROPE**  
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**INVERNESS RAILWAY and COAL COY.**  
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 the most modern type  
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 sizes of Steamers and sailing vessels.

Apply to Inverness Railway and Coal Company, Inverness,  
 Cape Breton; Wm. Petrie, Agent, Port Hastings, 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	No. 54 a. m. p. m.		Read Up	No. 55 a. m. p. m.
L 10 45	L 8 50	P. TUPPER JUNCTION	A 10 55	A 8 35
S 10 51	S 9 05	PORT HAWKESBURY	S 10 57	S 8 27
A 11 10	A 9 08	PORT HASTINGS	L 10 57	L 8 10
	F 4 11	TROY	A 10 52	F 9 32
	F 4 30	CREIGNINH	S 9 29	S 9 29
	F 4 50	JUDIQUE	F 9 22	F 9 22
	S 4 05	CHAIGMOIRE	P 8 48	P 8 48
	F 3 23	ATHERINE'S FORD	L 8 32	L 8 32
	S 2 38	PORT HOOD	A 8 27	S 8 40
	S 2 53	GLENCOE	S 8 40	S 8 40
	S 3 16	BARBOU	S 8 40	S 8 40
	S 3 28	GLENDYRE	S 8 40	S 8 40
	S 3 43	BLACK RIVER	F 7 15	F 7 15
	S 3 59	STATHLORE	S 7 02	S 7 02
	A 7 15	INVERNESS	L 6 43	L 6 43
	P 0 0			

Trains make close connections at Pt. Tupper Jet.  
 with I. C. R. passenger trains, excepting the Mar-  
 time Express.

Natural gas was produced in the counties of Welland, Hamilton, Norfolk, Kent, Essex and Bruce, in Ontario and at Medicine Hat, Alberta; the sales from the Ontario fields constituting over 95 per cent. of the total. The total receipts from gas sold in 1908 show an increase of about 24 per cent. over the receipts of 1907 and are now larger than at any time since the gas was first used.

Complete statistics of cement production in 1908 have been received from twenty three operating plants. The total quantity of cement made was 3,495,961 barrels as compared with a total 2,491,513 barrels made in 1907, showing an increase of 1,004,448 barrels or over 40 p.c.

The total sales were 2,665,289 barrels as compared with 2,436,093 barrels in 1907, an increase of 229,196 barrels or over 7 per cent. The total daily capacity of the 23 plants was about 27,500 barrels as compared with an operating capacity of 14,300 barrels in 1907. The operating plants were distributed as follows:—One each in Nova Scotia, British Columbia and Manitoba, the latter manufacturing a natural Portland, two in Alberta, three in Quebec province and 15 in Ontario. Of the 23 operating plants, 12 use marl and clay, ten use limestone and clay, and one blast furnace slag.

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Miners and Shippers of **Cow Bay Basin Coals.**

EXCELLENT FUEL FOR  
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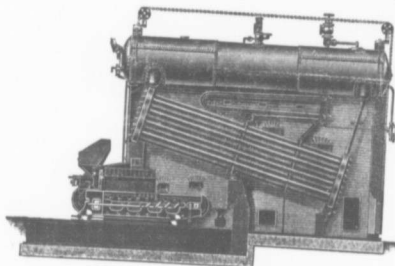
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SUPERHEATER AND IMPROVED MECHANICAL STOKER.

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Uniform in quality. Every barrel  
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Air Appliances, Coal Cutters,  
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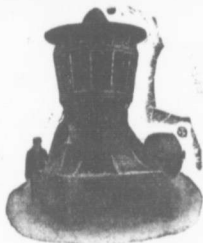
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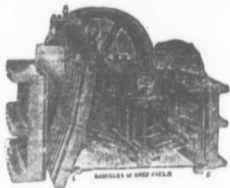
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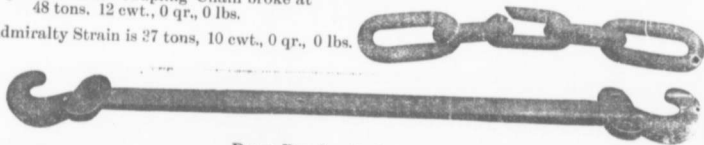
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## FRESH MINED SPRINGHILL COAL

... ANALYSIS ...

	NO 1	NO 2	NO 3
Moisture.....	2.02 %	1.41 %	2.71 %
Volatile combustible matter 18.9.4 %	27.93 %	28.41 %	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 %

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