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New Series Vol. 9 No. 1

JULY 11th., 1906

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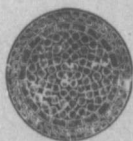
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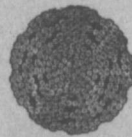
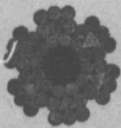
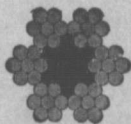
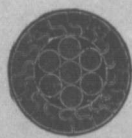
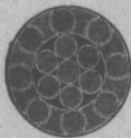
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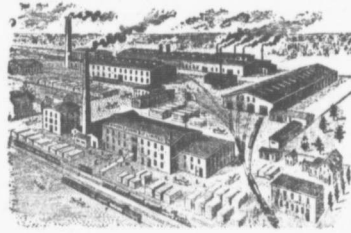
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78 Mixed for Hopewell	6.58
18 Express for Halifax, and St. John	7.40
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62 Mixed for Pictou	7.45
55 Mixed for Mulgrave	8.15
19 Express for Sydney	10.55
28 Mixed for Pictou	11.00
56 Mixed for Truro	13.35
84 Express for Sydney	15.50
30 Express for Halifax and Montreal	16.15
140 Mixed for Pictou	16.05
101 Mixed for Pictou Landing	16.50
22 Mixed for Hopewell	18.10
65 Mixed for New Glasgow	19.40
80 Express Halifax and St. John	19.45
17 Express for New Glasgow	21.15
66 Express for Pictou	21.15

—TRAINS ARRIVE AT STELLARTON

79 Mixed from Hopewell	6.30
78 Mixed from Trenton	6.55
61 Express from Pictou	7.30
18 Express from New Glasgow	7.55
21 Mixed from Hopewell	7.55
55 Mixed from Truro	8.00
28 Mixed from New Glasgow	10.40
27 Mixed from Pictou	11.15
56 Mixed from Mulgrave	11.15
19 Express from Halifax and St. John	11.45
139 Mixed from Pictou	11.55
83 Express from Halifax, St. John, Quebec	13.40
93 Express from Sydney	15.50
22 Mixed from Pictou Landing	18.10
77 Mixed from Hopewell	18.45
65 Express from Pictou	19.30
80 Express from Sydney	19.55
55 Express from New Glasgow	21.05
17 Express from St. John and Halifax	21.10

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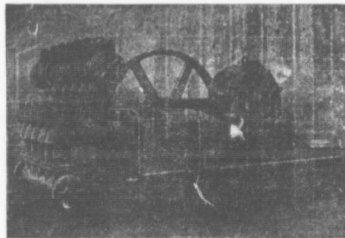
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"The quality of the water, and the fact that of all the pumps I saw there two out of three were Jeausville Pumps."

An inspection at least that we know how to handle the acid water problem.

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Minerals other than
Gold and Silver.

—LICENSES TO SEARCH—

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

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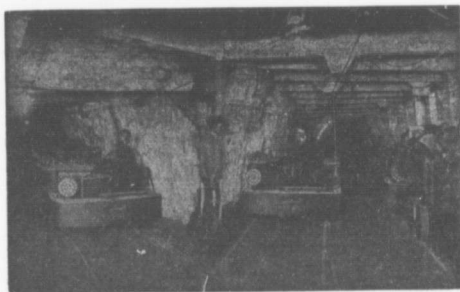
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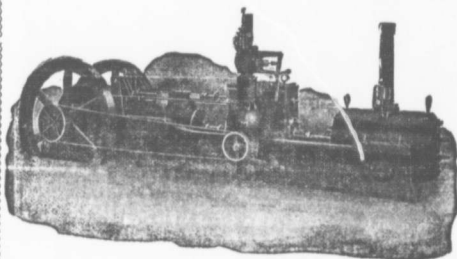


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Canada Air Compressors.

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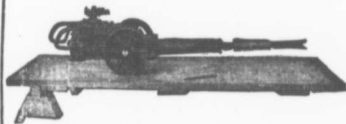
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Reduce the cost of production.
Increase the output per miner.
Produce more lump and less slack than
mining. Diminish danger to employees,
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This apparatus is to be used for pumping, ventilating fans, hoisting, lighting and general mine work.

The Westinghouse types of apparatus were chosen only after careful comparison and test and the fact that Westinghouse Generators were given the preference show clearly that they are the finest of their kind on the continent.

Then, too, they are made in Canada by Canadians—the plant of the Canadian Westinghouse Company at Hamilton Ontario, being one of the most complete in the world.

To His....

MARITIME MINING RECORD

Vol. 8, No. 1.

Stellarton, N. S., JULY 11th, 1906

New Series

GOB FIRES IN MINES.

Written for Record by William Oliver.

Q.—How are gob fires produced in a mine? How would you deal with a difficulty of this kind.

A.—Gob fires in a mine may be said to be produced by three causes, namely

1st. By the oxidation of the organic constituents of the coal. Coal absorbs from $1\frac{1}{4}$ to 3 times its volume of Oxygen, and there is no doubt that the exciting cause is absorption of the Oxygen of the air, by hydro-carbonaceous substances in a more or less fine state of division. This absorption is favoured by heating, moisture, fine division of the coal and absence of light. Coal absorbs oxygen very quickly, producing carbon-di-oxide and water, and a combination of Oxygen with the coal. This action produces heat chemically while the rapid passage of air through the pores produce heat mechanically. The coal must be broken up so as to expose a large surface for the coal to heat. There must be a sufficient mass of coal to prevent the heat from escaping as fast as it is generated.

2nd. By iron pyrites or "Brass" A chemical compound of 1 atom of iron and 2 atoms of sulphur, decomposing in the presence of moisture and oxygen produces heat. This heat is given off slowly and is probably insufficient alone to set the coal on fire. It helps to split the coal up and owing to the disintegration produced it allows the coal to be more rapidly permeated by currents of Oxygen, and the heating produced, though small, favours the action of such currents. The oxidation of coal is thus the primary agent, though iron pyrites and friction from grinding may greatly assist it.

A general indication of gob fires are: (1) Rise of temperature of return air; (2) Presence of haze or steam in the return; (3) Presence of gob-stink or fire-stink due to the distillation of the Hydro Carbons of the coal; (4) Sweating of roof and coal, this being generally the first indication.

When a gob fire is detected in a mine it requires strict attention and only capable men should be instructed to carry out the work. The method of extinction will vary according to the size of the fire, and may be done as follows:

1. Dig out the fire and send it out of the mine.
2. By the use of hand fire-engines, or water conducted to the fire by hosepipes.
3. Shut off the supply of air.
4. Flood the portion of the mine affected by carbonic acid gas.

In the first instance as soon as heating is discovered in a mine it is put out by simply digging out the hot part and sending it out of the mine, if the roof be fairly good. It sometimes happens that before the fire can be dug out water has to be used to keep the flame down,

after which the hot material is dug out and the place filled with sand. After the place is cooled down it is filled up again and faced across the front with a brick and mortar wall backed with sand.

The use of hand fire engines can only be successfully applied when the fire is discovered before it has reached dangerous proportions, or if water is obtainable in the main roads to supply water under pressure, the fire may be successfully dealt with by hose pipes conducting the water to the seat of the fire.

The above two instances may be considered with advantage when there is free access to the fire which is very rarely seen in the goaf of mines. The most successful means of dealing with fires is by completely shutting off the supply of air, especially under a bad and broken roof. Double brick and mortar stoppings, well plastered over with clay and filled in between with sand or flue dust are put in to shut off the supply of air. In some cases these stoppings should not be less than 30 yards in length of solid packing. At important points stoppings are built a few yards apart, so as to reduce the chance of leakage past the walls. Cross packs built up with sand or flue dust are built across the wastes to prevent the circulation of air through the goaf. Great care and precaution are necessary in preparing the stoppings. Every endeavour must be made to prepare and build all stoppings at one time, but if the site of the fire and the area to be built off includes the intake and return air passages and air currents, then the mode of procedure is as follows: Leave the intake air passage until last and by no means seal it off first. First stopping off the return air passage and then seal off the stoppings between the return and intake working from the return towards the intake. Complete the stopping by sealing off the intake passage. The reason for this is as follows: If the return stopping is built first and the stoppings sealed up from the return towards the intake, the outlet for the gases and smoke is closed and they collect, and, since they do not support combustion, assist in extinguishing the fires and prevent the formation of explosive mixtures, or cause explosive mixtures to be rendered innoxious. Further the intake air causes the smoke and fumes to be pent up and held back, and this arrangement allows time to build off the intake stopping and work with a supply of fresh air. On the other hand if the intake stopping was first sealed off the smoke and fumes generated by the fire would readily flow towards the return passage and render it dangerous and impossible to stopping off the return passage.

Whilst building the return stopping or stoppings in close proximity, it may be found advisable to reduce the volume of air, but care must be taken to see that the workmen have a sufficiency of air. When building the intake side stoppings, and the intake stopping the whole ventilating current should be allowed to pass. A good plan is to have two sets of men, one relieving the other

at intervals, the relieved party to rest in fresh air. The gases given off from a gob fire are very poisonous, especially two, Carbon-monoxide, and Sulphuretted hydrogen, these being of an exceedingly deadly nature. These renders the work of extinguishing a fire a dangerous task and the greatest care is necessary in order to prevent loss of life to those engaged in the work, hence the need for two sets of men, as one set are always ready to render first aid to any person overcome by the poisonous fumes, whilst the work is more rapidly advanced.

The men chosen for such work should be steady, reliable, and free from nervousness and tear, men of experience in dealing with underground fires and who realise the dangerous task before them, whilst the work should be superintended by a competent official.

The fourth enumeration deals with the fire by flooding a portion of the mine with Carbonic acid gas, which effectually puts out the fire and has no disastrous effects upon the mine workings. This gas may be produced by pouring hydro-chloric acid upon broken limestone enclosed in very strong boxes lined with sheet lead, pipes being led away from these boxes and conveyed through the stoppings leading to the affected districts.

In some cases it is found necessary to flood the whole mine with this gas, and in this case a scaffold is fixed in the shaft a few fathoms from the surface and the Carbonic acid pipe passed through this, and the gas forced into the mine until it appears at the top of the up-cast shaft.

In fiery mines liable to gob fires it is essential that the workings should be so laid out that a fire occurring in any part of them may be shut off from access of air with as little difficulty and in as short a time as possible, and further, the stoppings isolating the fire should be strengthened by stowing or otherwise so as to be capable of resisting the force of an internal explosion. A fire may smoulder in the geaf for an indefinite period ready to break out if the stoppings are opened and air admitted, hence it is necessary that stoppings once built up should remain so as long as it is possible to allow them.

The only certain way of extinguishing a large fire is to submerge the mine, or district of the mine, under water, after which the water is pumped out again and operations commenced. This, in most cases, is an expensive affair, and never resorted to until every other plan has failed, for generally the water takes a deal of time to get out again besides doing considerable damage, especially if the roof and pavement are of shales or any soft substance.

CITY & GUILDS OF LONDON INSTITUTE.

DEPARTMENT OF TECHNOLOGY.

TECHNOLOGICAL EXAMINATION, 1906.

-52 Mine Surveying.

Ordinary Grade.

—INSTRUCTIONS.—

Candidates must previously pass a preliminary examination.

A sheet of drawing paper is supplied to each candidate.

Candidates may use instruments, parallel rulers and mathematical tables.

The working out of all answers to be shown.

Three hours allowed for this paper.

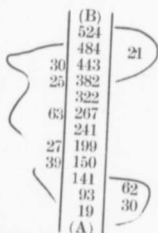
Question 1 and 3 must be done and 3 others,

1. Calculate the Co-ordinates of the following traverse survey, and plot by Co-ordinates to a scale of two chains to the inch.

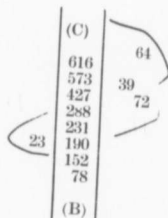
No.	Bearing	Distance in Links
1.....	S 0 deg 00'	545
2.....	S 23 " 15' W	501
3.....	S 19 " 05' E	190½
4.....	S 51 " 10' W	301½
5.....	S 62 " 35' E	708
6.....	N 30 " 07' E	493
7.....	N 32 " 07' E	598
8.....	N 23 " 50' W	525
9.....	N 64 " 18' W	681½ (90)

2. Calculate the area enclosed by the above traverse. (60 marks.)

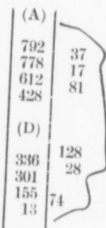
3. Plot carefully the subjoined chain survey to a scale of 50 links to the inch. (50)



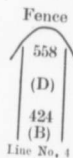
Line No. 1 about N. N. W.



Line No. 2 about W. S. W.



Line No. 3



Line No. 4

4. A seam of mineral dips 47° to the horizontal towards N 24 deg. W., what will the gradient in inches per yard of a road in the seam running due west be. (40)

5. Describe in detail the construction of the ordinary dumpy level. (35)

6. At a given point in a straight road underground, you are required to set out a curve of 8 chains radius which is to be continued as a straight road branching at an angle of 65 deg. from the main road. Describe exactly how you would proceed to set out the work, and state what instructions you would give to the foreman in charge. (50)

7. Three boreholes A, B, and C, are put down in level ground to prove a seam of mineral, each being $27\frac{1}{2}$ chains from the other. The Co-ordinates of A and B are respectively:

A latitude S 1000 links. Departure E 250 links.
 B " " N 1872½ " " E 2660½ "
 Borehole C lies west of the other two. Borehole A struck the seam at a depth of 792 ft., B at 143 feet, and C at 2,102 feet. Calculate the direction and amount of dip of the seam. (50)

8 Describe the box Sectant and explain its mode of action. (35.)

THE CAUSE OF BLASTING ACCIDENTS.

"The Home Office has published the report of Captain J. H. Thompson, H. M. Chief Inspector of Explosives, on the fatal accident which occurred on the 14th, March last on the Deane Valley Railway (in course of construction), causing the death of three persons and slight injury to five others. The accident occurred during blasting operations in connection with excavation work.

Captain Thompson states that there can be no doubt whatever that the explosion was due to the striking of unexploded gelignite by one of the men with his pick. A probable cause of the presence of explosive in the debris is that some portion of a charge escaped explosion. This explanation would be entirely in accordance with experience with similar accidents, which are unfortunately rather frequent in their occurrence.

Of the total number of accidents of this description (117) which have occurred in the last five years 87 have been caused by nitro-glycerine explosives, and out of the latter total (87) the number which have occurred between the months of December and May inclusive is 77, or over 88 per cent. It is just within these months that nitro-glycerine explosives are likely to be in a frozen condition, and the conclusion may safely be drawn that in the case of such explosives the freezing of the nitro-glycerine plays an important part in producing this class of accident, probably by rendering the cartridges less susceptible of detonation.

In this case, however, Captain Thompson is disposed to think that freezing does not come in as an important factor in the cause of the accident. He sums up his conclusions as follows:—

- 1.—The accident was due to the striking of an unexploded portion of a charge which remained in the debris after blasting.
- 2.—The presence of this explosive in the debris may be accounted for by the falling in of rock fragments in the bore hole during charging, whereby a portion of the charge became separated and escaped detonation.
- 3.—Such accidents are of common occurrence, and must be regarded as inseparable from the operation of blasting.
- 4.—No further precaution likely to diminish the number of these accidents can be suggested."

W. H. Springhill, writes:—

"The above extract is from an English paper. I would like very much if you would publish it in your valuable paper as it will no doubt be of much interest to your numerous readers all over the province of Nova Scotia. You will notice in the summing up the Inspectors report, clause 2, states that the presence of the explosive in the debris may be accounted for by the falling in of rock fragments in the bore hole during charging and thereby separating the charge, a portion of which escaped detonation. To my mind it would be impossible for fragments of rock to fall into a bore hole

probably 1½" diameter. Even if such a thing did happen and the shot went off at all the whole of the charge would be exploded instantaneously. Probably some of your readers will be able to offer some solution of this matter. Might it not more likely have been a missshot?"

There was no let up of work at the Allan Shafts on Dominion day. This is proof that there must be the best of relations between the management and the men.

BEAUTIFYING HALIFAX EXHIBITION.

The appearance of the Nova Scotia Exhibition Grounds at Halifax is being revolutionized by gangs of men who are getting them into shape for the Dominion Exhibition, and those who have been coming to the provincial shows in past years will hardly recognize the old grounds as they appear in use by the great Dominion Exhibition.

The area enclosed by the half mile track has been levelled off, grass seed sown, small buildings removed and a new vaudeville stage erected, with dressing rooms beneath. Workmen are engaged doubling the floor space of the main building and making important changes and improvements in Machinery Hall. Alterations, extensions and repairs are being effected on all sides within the immense enclosure.

The entries for the Manufacturers (main) Building close on July 16th., and so great is the pressure of application for space, up to the present the Manager fears he will have to cut down on some of the spaces asked for to accommodate all. Many splendid and novel exhibits are included in what has already been applied for, and the public will have an opportunity of seeing the largest and best exhibits in these lines ever seen in Eastern Canada.

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

MARITIME MINING RECORD.

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R. DRUMMOND, PUBLISHER.

STELLARTON, N. S.

JULY 11th 1906

The Suburban made its first score in its contest with the Record when it was able to disprove the statement that coal to the Brookline authorities cost \$3.67 and not \$6.67 as quoted in this column. Of course, while pleading guilty to inserting a wrong figure, we have the excuse to offer that we took our figures from a source that is held on all sides to be reliable, viz. The Coal Trade Journal of New York. The probability is that the figure 6 instead of 3 was a printer's error, but the error was not serious, and was seized upon by the Suburban as a drowning man will seize at a straw. After all \$3.67 is a stiff price to pay for coal in a country where coal is carried cheaper than in any other country in the world.

- Rubs by Rambler.

If friend McNeil of the Suburban was as knowledgeable as he is earnest, he would be to many folk more a thorn in the flesh than he actually is. His zeal in the interest of cheap coal for the common people—and for the Halifax manufacturers—is remarkable; indeed, it may be said of his energy in that direction that it is a consuming zeal. I will scarcely say that his zeal is accompanied with—indiscretion, though there are some unconvincing enough to hint as much. The Suburban Editor would like to show that the people of Nova Scotia generally are being overcharged for their coal, but all he has been able to demonstrate so far is that coal is higher now than in previous years. He asserts that it is awfully high to small consumers in Halifax, but this point he has not backed up by any evidence that may be called conclusive.

The Suburban is either logical, or inconsistent or indifferent to the prosperity of the coal trade of the province as a whole. It declaims against the Dominion Coal Co. as a sinner above all others as regards the price of coal—inferentially.

It accuses it of being a monster combine, of being the ugly Octopus that is fastening its fangs on the attenuated purses of the poorer of the people—also inferentially.

And yet at the same time its latest argument if followed to its logical conclusion would put the coal consumers of the province in the grinding grasp of a greedy combine, or at most two concerns that it might choose call combines.

The Suburban's argument is this. If coal costs the Dominion Coal Co.—the Suburban's standing sore—and the Nova Scotia Steel & Coal Co.—I put in this company of my own accord—half what it costs the International Coal Co., the Cumb. Ry. & Coal Co., the Acadia Coal Co., and several other concerns, I had almost said not omitting the Port Hood Coal Co., then the Dominion Coal Co. and the Nova Scotia Steel & Coal Co. should sell their coal at half the rate charged by the companies mentioned. If this were done then Springhill, Westville, Stellarton, Thorburn, etc., would in a few months be towns and villages deserted and forsaken. If these two companies quoted coal at half the rate quoted by the other companies, will it not mean that they would get all the trade and that the other companies would be forced out of existence, and that accomplished would the last state not be incalculably worse than the first. Would not all the province be in the grip of two companies that could do,—all competition being removed—just as they pleased and not otherwise. To show that I am not mistaking the Suburban's position, let me quote—

"For instance, in writing the interesting account of a visit to the Drummond Colliery, he could not close without wishing that the editor of THE SUBURBAN had been there to learn why coal costs so much in Nova Scotia. The ingenious sophistry involved in this is entertaining enough, but the fact that coal costs twice as much to produce at the Drummond—as at some other collieries, and that those same collieries sell it at the same price as the Drummond, is that there must be some handy arrangement about selling somewhere."

If, as the Suburban assumes—it was not so stated in the Record—the Dominion Coal Co. can produce coal at half the cost involved in production at the Drummond, then the selling price should be in accordance with the cost. This is a strange proposition. It means that mines, manufacturers, or any kind of producers are not to benefit by location, by natural facilities, such as easy angle of seam, etc., by large expenditures, and or by favorable conditions generally, but to sell their wares in proportion to what they cost, regardless of the cost of production to others in the same line, and heedless of what they might obtain for them honestly and justly. Not many people would admit that this was business. I would be sorry that the Suburban's ideas should prevail. Such would mean devastation to hundreds of homes, and scores of thriving settlements in the province, in the mainland more especially.

At the late local election some of the opponents of the government thought they might do well to advantage the Truck Act, so called, and certain amendments to it passed at last session of the House. The attempts to make capital out of the Act itself or the amendments were conspicuous failures. The large body of the C. B. miners, all the thrifty, industrious, and intelligent among them, and it is satisfactory to know these constitute the largest class, took no stock in the attempt at agitation, as they know full well that at the present time 'truck' in its offensive sense is practically non-existent in C. B. They know that there is not the slightest compulsion in the matter of where a man 'deals', every workman is a free agent; and that the one who chooses to deal

DOMINION NO. 6.

Though Dom. No. 2 may at odd times be facetiously referred to as the big baby of the Dom. Coal Co., the two real babies are the Hub and Dom. No. 6, the latter being the sturdiest and the most stirring, and the one demanding at the present time the most care and attention. The hope is that in the future, when it has reached maturity it will repay its sponsors for all the care, time and money expended upon it, and its friends declare it will. When Dom. No. 6 colliery was being planned the impression was received that it would be a model of simplicity and economy while efficiency would not be disregarded. It may have up till now fulfilled the desired aims, but to the casual onlooker it does not seem so simple an affair as he may have been inclined to believe. Rather to him do the works above ground appear not unpretentious and formidable, but striking imposing and comprehensive. Instead of being primitive it is modern in its fullest sense, furnished with all modern appliances. True there may be no luxuries, while nothing necessary has been omitted. In outward appearance at least the colliery is one that its projectors need not be ashamed of. Having visited the colliery last fall, when the prospect was perplexing rather than pleasing owing to the variety and amount of construction work being carried on the writer desired to see how the colliery looked now that the entire surface plant was nearing completion.

Having found favor in the eyes of Mr. H. J. McCann, who, in addition to his other duties as assistant to Mr. A. Dick, that prince of gen'l sales agents, occasionally takes a turn round the collieries to see that only properly screened and picked coal is being sent to market, he cheerfully agreed to accompany and provide the necessary transportation facilities which in this instance consisted of a horse and wagon, as there is as yet no passenger coaches running between Glace Bay and No. 6. No letters of introduction were needed. That the writer was fully accredited was attested to by the fact, facts, that the wagon was the company's, the horse the one allotted the General Manager, the overcoat he wore that of Mr. Fergie the Inspector of all the company's mines, and the cicrone Mr. McCann. One need have no trepidation in driving with this gentleman. He knows how to select a nag that will exhibit a proper degree of spirit in passing through thoroughfares, and take it coolly and calmly when away from the public gaze. Away from the town he embraced the opportunity to make himself familiar with the details of the landscape, affording of course the like opportunity to those he carried, and on such a glorious morning, with such congenial company one would not have it otherwise.

There have been changes in the past six months. A large portion of the old trestle which skirted the beach and on each side of which had been dumped in years long gone by thousands of tons of then unsaleable slack coal, has been swept away, and the whole once formidable structure is tumbling to pieces or being torn away. By and bye where the trestle stood there may be planted summer hotels and bathing houses, for no more enticing strand of gleaming sand, nor brighter or bigger breakers, nor white surf can be found on any coast. At the end of the

in the store is not in any way favored above or before he who does not. The fact is there never was need of a Truck Act in Nova Scotia, unless indeed it had been enacted a quarter of a century prior to the time it was introduced. When it was enacted the germ of the evil it was sought to cure had been killed. Its death was accomplished at the hands of the P. W. A. which protested against any interference with the workmen's right to purchase his supplies where he choose. The Act was passed to gratify a few who wished to have some small claim to be called reformers and friends of the workingmen. So far as the workmen are concerned the stores of the company are a matter of minor importance. The amendment to the Act found most fault with is that which says that the fine in case of a successful prosecution shall go to the Treasury and not to the complainant. This is a wise amendment, as a possible preventive of malicious prosecution. It might pay a dishonest workman to take goods from a company's store to the value of five dollars and when the money was stopped institute proceedings, get half of the five and pocket \$20.00 net. The law should afford no encouragement to evil disposed persons to institute proceedings for gain or through malice.

There are those, no doubt, who think it a reproach on twentieth century civilization that females should be employed at coal mines in any capacity. A few years ago when on the other side I visited a colliery in Fifeshire for the express purpose of learning at first hand whether or no there was anything degrading in the work allotted females on pit bank heads. After the visit and after seeing the buxom, rosy cheeked lassies at work I concluded that the labor was preferable to employment in a badly ventilated mill or factory, and that less evil might be learned than in many other avocations. The Inspector for the East of Scotland is of a like opinion. In his report for 1905, referring to the increase in the number of surface workers he says:—

"Female labor accounts for 123 of the surface increase, and is in keeping with what has been recorded year after year. As stated last year, this labor is mostly at the picking tables in connection with coal cleaning; a number are engaged in taking off and putting on tubs at the cages, but the proportion at this class of work is small. Years ago at many of the smaller collieries it was quite common for women to be employed trimming the coal on the wagon top; but this is seldom seen nowadays. With the exception, perhaps, of the hauling of tubs, the work is not laborious, and is very healthy, and those employed are for the most part of good physique. On the whole, the class of females employed, both as regards health and morals, will compare favourably with any other class of female workers."

Mr. Lupton, M. P., giving evidence before the Parliamentary Committee on the supply of electrical power, described a system which he was ready to embody in a Bill, and form a company to work. The scheme was for making London smokeless by generating electricity at the Derbyshire coalfields, and bringing it to London by high tension transmission along the public roads. It would thus be able to provide nearly the whole of the electric power required in London for tramways, railways and factories, and for lighting and warming the streets and houses. The smoke nuisance in London is estimated to involve a loss of £2,000,000 a year.

disappearing trestle we pass the remains of Port Caledonia or Big Glace Bay, where shipments from the Caledonia mine were regularly made and carried on for years. On account of the expense of dredging, the place as a shipping port is to be abandoned. On the further side of the Harbor we pass the site of the Clyde mine abandoned many years ago. This mine was never, from some cause, a success, though many parties had a trial of it. Further along Schooner Pond is passed where in the seventies was operated by an English Company a slope leading to the Emery seam. This mine had connection by rail with Sydney and Louisburg. The pit had to be abandoned as the workings were submarine and there was not sufficient cover to comply with the Mines Act.

The colliery works and not the surroundings are the noticeable features on arriving at No. 6. Though the location of the town is considerably above the shore line the houses do not seem to be on an elevation. There is no main street as yet, and only one or two stores. The company has a store well filled no doubt inside, but outside, is unattractive architecture. The company's office, too, is unvarnished outside and unfurnished inside, but that is the way with the offices at the collieries generally, though perhaps it might be better were it not so. Owing to the laying of a piece of track to give proper connection the colliery is idle, and groups of pit men are hanging in the machine shop, and on the tracks. Everything is being rushed for a big output beginning with August.

All the surface buildings are substantial. The engine house and boiler shed are of brick, and so constructed as to admit of enlargement, with system, in the future. There are three batteries of Babcock and Wilcox boilers which supply power to the large air compressors and the winding engine. The bank head proper is a massive affair with ample room for as many screens and picking tables as will be required. The picking tables are long and wide. The boxes which will haul the coal from the pit have length as their chief characteristic. Each box holds two tons. When the full box is being tipped into the screens its contents are divided into two portions by a simple contrivance, one portion going to a picking table to the right, the other portion to the left. This is a simple and expeditious way of spreading the coal, so that foreign matter may be extracted. The screens are devoid of bars. Instead they are constructed of sheet or plate iron, the upper plate having $1\frac{1}{4}$ inch in diameter perforations, down to $\frac{1}{2}$ inch in the lowest ones. There is an arrangement whereby certain kinds of coal may be dumped direct into the cars without passing over the picking tables. The boxes, after being conveyed over the brow of the bankhead, are supposed to run by gravity to the screens, and the empties to run in a similar fashion from the tipples to the creepers. This may be easy of accomplishment in warm weather. A thing very noticeable on the bank head is that the wire rope used in winding from the pit does not come within several hundred feet if not yards of it. The rope is cast off from the full rake and attached to the empty one, at a remarkably long distance from the bank

head. After emerging from the slope and reaching the level road the rope is cast off and the boxes run by gravity to creepers which convey them to their respective destinations. Creepers, for the most part, are of the same pattern as the others, for the approach to No. 6 bank head. That the boxes will run to and from and connect with the creepers in all weathers, without human agency is what is expected, but what may possibly not be attained. A similar expedient did not turn out an immediate—or ultimate—success at one or two of our provincial collieries. Standing on the rake track midway between the slope mouth and the incline leading to the bank head and looking up one fails utterly to realize where the simplicity in construction and arrangement comes in. Left to himself one might conclude that the devices for conveying the boxes to the bank head were a trifle complex, but that might only go to prove that he had not got beyond the novice stage in the transportation department of mining. No doubt the curves are graceful and the bends classically—if not exactly Grecian, but are they necessary? That the construction, as a whole is a thing of beauty, is indisputable; that it will be a joy to Mitchell, the new manager, in its first operation, and for ever thereafter, is permissible to debate. The Record sincerely hopes that it will more than fulfil the largest anticipations. Outside of the gravity roads and the creepers there is not even standing room for friendly criticism. The work has been well and truly laid out, completed, and the coal once it reaches the bank head can be quickly handled and thoroughly cleaned. Beginning August it is expected No. 6 will be a producer to the amount of 800 tons per day. The Underground Manager, Angus R. McDonald declares that if he gets a fair show he will have no difficulty in sending at least 1200 tons per day to bank, but until things find their feet the smaller quantity named should satisfy the officials. One good thing that can be said is that the development in the pit has more than kept up with surface construction. There is ample pit room and places sufficient for a 1500 ton per day output. In making ample provision of places the management is to be highly commended. The coal is to be worked longwall by machine, alike in the interests of economy and the production of coal of superior quality,—as to size. Mr. Chas. Mitchell succeeds Mr. Robertson as superintendent, and it is now up to him to make No. 6 hum, either to "mak a spoon or spile a horn."

There is, by the way, a trim little machine shop, in which it is expected all the repairs at the colliery will be done. There is not the variety of tools to be seen in the general machine shop at Glace Bay, but the machines that are in the shop are of the best, and well fitted for the work required of them.

Where the axles are stationary on pit boxes the flange of the creeper grips the axle and takes the box along. In the No. 6 boxes a projecting metal plate is fastened underneath into which the flange of the creepers fit. The size and the shape of the boxes will necessitate the keeping of the pit roads and all other roads over which the boxes travel in good condition, for if a box goes off a sturdy loader, or even two, will not be able to put it on in the old fashioned way, with back and

hands. Originally it was intended that there should be two slopes from which coal should be drawn to the bank head. The coal to the east was found not to be up to the high standard demanded at the present time, and therefore the slope is for the time being abandoned. From the one slope however as much coal may shortly be obtained as the picking tables can conveniently handle. The Record wishes No. 6 success.

Coal Shipments JUNE 1906.

DOMINION COAL COMPANY, LTD.

—Output and Shipments for June 1906.—		—Shipments—
	—Output—	
Dominion No. 1	43 534	
Dominion No. 2	51 887	
Dominion No. 3	37 525	
Dominion No. 4	52 779	
Dominion No. 5	62 528	362 011
Dominion No. 6	3 460	
Dominion No. 7	15 478	
Dominion No. 8	24 934	
Dominion No. 9	33 866	
	325 991	362 011
Shipments June 1905		332 520
Increase " 1906		29 491
Shipments 6 mos. 1906		1 430 596
" 6 mos. 1905		1 156 810
Increase 6 mos. 1906		273 786

INTERCOLONIAL COAL CO.

Shipments June 1906	27 988
" " 1905	16 693
Increase " 1906	11 295
Shipments 6 mos. 1906	139 543
" 6 mos. 1905	88 089
Increase 6 mos 1906	51 454

ACADIA COAL CO.

Shipments June 1906	26 873
" " 1905	24 826
Increase " 1906	2 047
Shipments 6 mos 1906	125 320
" " 1905	115 291
Increase " 1906	10 029

CUMBERLAND RY. & COAL CO.

Shipments June 1906	33 259
" " 1905	31 184
Increase " 1906	2 075
Shipments 6 mos 1906	223 474
" " 1906	187 679
Increase " 1906	35 795

NOVA SCOTIA STEEL & COAL CO.

—SYDNEY MINES.—

Shipments June 1906	74 100
" " 1905	65 443
Increase " 1906	8 657
Shipments 6 mos. 1906	264 913
" " 1905	187 462
Increase 6 mos. 1906	77 451

INVERNESS RAILWAY & COAL CO.

Shipments June 1906	18 000
" " 1905	16 357
Increase " 1906	1 643
Shipments 6 mos. 1906	72 458
" 6 " 1905	56 081
Increase 6 " 1906	16 377

RECEIPTS OF COAL AT MONTREAL FOR JUNE.

—1905—		—1906—
11,031	Nova Scotia Steel & Coal Co.	21,365
169,813	Dominion Coal Company	157,686
7,131	Port Hastings	7,082
1,345	Port Morien
6,062	Intercolonial	6,069
9,230	Acadia	12,533
4,333	Scotch and English	2,988
208,945		207,743

The Albion made a very good showing last month in the face of many difficulties. It is to be hoped the obstacles encountered in the sinking of the new lift in No. 3 seam will soon be overcome.

As a steamer the Foord pit coal taken from the Allan shafts is turning out of the best. The coal appears to be rich in carbon, and at the same time is an excellent coker.

Mr. Jos. Hudson has by patient labor, secured everything of importance that was ever written—ancient and modern—on sub-marine mining, and the possibility is, that if he does not give it in instalments to the RECORD, the information gathered may be published in book form.

The coal in the Hub is getting better all the time. If at one time it was high in sulphur all that has changed. Mr. Hudson declares that the grate bars show no signs of burning after several years use. The pit is in good condition and things above ground are neat and orderly.

Owing to a scarcity of miners the output from the McGregor seam is only half or less what it should be. It is impossible to obtain loaders. Men may come looking for work, but if they are asked to go loading they turn upon their heels. On account of the scarcity of labor it is useless to attempt to discipline some who absent themselves from work without cause. This can be said of almost every mine in the province. More's the pity.

AROUND THE COLLIERIES.

It is expected that the New Campbellton colliery will ship more coal this year than for several past years.

The I. C. R. called for tenders for some 440,000 tons of coal. It is said bids were received amounting to over a million tons. This does not look very much as if there was a combine. It is said that over a hundred thousand tons of Scotch coal has been offered for delivery at a Gulf port. Prices are about the same as last year except perhaps in the case of water borne coal. In order to compete with rail delivery the rail rate being placed at a quarter of a cent per ton per mile, bidders for water borne coal had to relax the price a little, even though they could not well afford to do so. The railway will effect a considerable saving this year, not owing so much to any reduction in price on the part of the shippers, as to the fact that coal that can be carried by water will not be taken by rail.

The Hub colliery of the Dom. Coal Co. is now producing all kinds of coal, picking tables, screens and other necessary appliances having been set in motion recently. The Hub is now in a position to ship its product in the best of condition. Of course the colliery can never be a big producer, at least not for a long time, as the workings are sub-marine. What difference does that mean? It means that at present only 30% of the coal can be extracted, in other words while the rooms are 20 feet wide and an occasional 'head' 12 ft. wide the pillars left standing are according to depth of workings from 50 x 75 to 70 x 75. The cover at present is 300 feet. After it has gained to 500 more coal may be taken. And for the same reason that it cannot be a big producer it cannot be a cheap producer. All the work may be classed as 'leading' work which is the most expensive.

As one travels round the Southern collieries of C. B. the names of Duggan, Dick, Donkin, Fergie, Blackett, and McCann are frequently heard as those of the greater lights, and among the lesser lights the names of—Well, now, how stupid, I was about to give some names as being in that class, forgetful that there are none such and forgetting also that I may have occasion to go to Cape Breton again ere long. But a name, belonging to one whose services count for very much, not so frequently heard, is that of Mr. Jos. Revere, the purchasing agent for the company. This may be due to the fact that Mr. Revere is not obtrusive or ubiquitous, but sticks to his own far away corner in the general office. It takes him all his time to attend to his highly important department. Where such vast supplies are bought very good judgement is necessary and Mr. Revere's judgement goes unchallenged. He is perhaps a trifle matter of fact, and it may be careless of sentiment, but the company is not a loser but perhaps a gainer thereby. Mr. Revere has been connected with the company since its organ-

ization, indeed if I mistake not he went to Glace Bay before the transfer of the areas occurred. A stranger at first blush might think Mr. Revere a little gruff, but instead of that he is held to be one of the most genial of the company's staff and that is saying a good deal when every one of the members of it is genial and gentle manly.

Though as regards volume the increased coal shipments of the Dom. Coal Co. are far and away above those of any of the other companies, yet in the matter of per centage of increase, the Intercolonial Coal Co. runs away with the laurels from its big competitor. While the increase in shipments of the Dom. Coal Co. for the six months ending June, shows the remarkable and gratifying gain of say 24% over the same period of last year the increase for the same periods in the case of the Drummond shows the phenomenal increase of 58%. The Nova Scotia Steel & Coal Co. also shows the splendid increase of 41% for the six months over those of 1905. All of the companies are showing most creditable increases in shipments and these increases will be added to month by month unless the men become too intoxicated with success to care for work.

There was no let up of work at the Allan Shafts on Dominion day. This is proof that there must be the best of relations between the management and the men.

The bankhead excepted, the Power House at Dom. No. 2 is the most extensive structure at the colliery. It is unpretentious in appearance, and looking at it from the outside one forms no correct idea of the space capacity of the interior. The building is some 270 feet long by 82 feet wide. The building with its contents represents a value not much short of a quarter of a million dollars, and not any of that large amount can be placed in the list of unnecessary expenditures. The building contains five compressors. Three of these are tandem, of Canadian Rand Drill Co. make. One is American and may be called three staged, and the fifth is of English make. The American

machine supplies air to the motors in the mine of which there are ten. The Rands, and the English machines furnish air to the pumps, to the stationary engines in the mine, and to the shearing and coal cutting machines. In the addition lately built to the power house are to be installed dynamos to supply light and power to the various mines where electricity is the motive power. The line connecting several of the collieries with the consumption of compressed air at Dom. No. 2 is something startling. About 600,000 ft. per min. is required for Dom. No. 2, or the Phelan, and 120,000 feet per hour for the Hub or No. 9.

AROUND THE COLLIERIES.

The Allan Shafts contributed a little to the total of the Acadia Coal Co's shipments for June. This month their contribution should not be less than 3000 tons.

The output of the Dominion Coal Co. for June was not up to expectations, accounted for in chief part by the scarcity of labor, or to be specific, of loaders in the mines.

The best days output of No. 3 so far this year was 2100 tons. It is expected that for the balance of the summer No. 3 will add 40,000 tons per month to the Dominion Coal Co's output.

Work is rushing at the Allan Shafts, and order is gradually being evolved out of what to some may have looked confusion. Lots of work is being done and there is a great lot yet to do.

The wire rope that hauls the coal from the mine to the Dominion No. 3 bankhead is 21,000 ft long, and yet there are those who wonder why coal costs more to produce than a dollar a ton.

The number of men employed at Dom. No. 3 is 585. The output averages say 1800 tons per day, which gives a little over three tons of coal per man employed. This is a satisfactory average, and from these figures it is deduced that No. 3 is not an expensive mine.

The biggest day's output so far this year for Dom. No. 2 was 2332, and for the Harbor 1616, a total of 3948. This is not quite up to expectations, and as in the case of other of the collieries it is to be attributed to shortage of laborers. Sixty loaders could find immediate employment in the mine, and sixty more in a fortnight hereafter.

There are those who say that the Emery seam coal is not the best on the Island. Again there are those who say it has no equal. Among the latter may be classed the enthusiastic Mr. McVey. He says the Emery is a fine coal and contains little or no sulphur, that for three years it was tested under the fire doors, and not a burned bar had to be replaced.

Operations are quietly being conducted in opening out a seam of coal at Greenwood, a short distance, say three quarters of a mile, from the Marsh Colliery. A slope is being sunk which may be called experimental. The coal is a few inches over four feet thick, and competent judges who have seen it speak favorably of the quality.

There are Scotsmen of recent arrival at all of the collieries. Some of the managers find them fractious, while others seem to get along with them fairly well. Until the newcomers become familiar with conditions in this country, firmness with consideration must be exercised. Many of the new comers criticise the system of work, but after they have come used they must 'govern themselves accordingly' they do 'not so bad.'

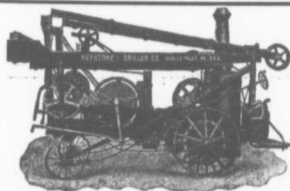
The Record judges the No. 3 is one of the cheapest producers of the mines of the Dominion Coal Co., notwithstanding the long distance the coal has to be hauled below and above ground before it reaches the screens. Mr. McInnis, in spite of those who predicted to the contrary, has proven himself to be a most capable superintendent. Everything about the colliery is working smoothly and the superintendent experiences little trouble is breaking in late arrivals from the other side.

The bulk of the product of Reserve Mines comes from the French Slope. When speaking of the Drummond slope as the longest on the continent, reference is made to a slope in a seam at a high angle, for the Drummond while deeper does not reach in length so far as the French slope. From the surface to the face of the slope the distance is 10,000 against say 7000 feet for the Drummond. But then the Reserve dips only one in twelve as against one in three or so, and the cover overhead at the face of the French slope is some 500 feet only as against 1800 feet at the Drummond Mine slope face.

The Record asked the manager of a mainland mine how it was that his output was not increasing, was there not a sufficient market for coal? The reply was "We can sell more coal than we are producing, but the simple truth is our men won't work regularly." Are they making good pay when they do work, "Yes", indeed one cause of the irregular work is that times are too good. Is it not a pity men are not providing for the future, putting money in the bank so that they may be quite independent of any old age or other delusive pension scheme.

Operation in the mine, Allan Shafts, has been somewhat retarded by the want of air, both of compressed air for the machines and of natural air for ventilation. These two obstacles to development have now been overcome. A fan which did service at the Acadia with a capacity of 60,000 feet per minute, sufficient for requirements for a year or two, has been set up at No. 2. Compressors also have been installed so that from this out development work should proceed without interruption. The fan is driven by a 150 H. P. Robb compound engine.

The six largest coal producing concerns in the province have to their credit for the six months of 1906 no less a quantity than 464,000 tons as increase over shipments for the first half of last year. The increases in the smaller companies such as the Blockhouse and Gowrie and the New Campbellton on the Island, and the Maritime, Minudie and other companies on the mainland should bring the figures up to the round half million. If the latter half of this year does as well as the first, then 1906 will come fully up to expectations, a rare thing.



The KEYSTONE
Percussion Core Drill Attachment
is an economical appliance for
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 delay and expense of "rods" water wash, diamonds, shot, and heavy operating mechanism.

Price of Complete Attachment
\$200.00

Catalog No. 2 B. is a book on the subject.
We make Water, Oil & Test Well Drillers
for all depths and purposes.

Keystone Driller Co. Beaver Falls, Pa.



The TORNADO
AIR POWER
COAL DRILL

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Nova Scotia Steel
and Coal Co.,
Inverness Ry.
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MABOU DIAMOND COAL.

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Looks and Lasts Like Anthracite;

IT HAS NO EQUAL.

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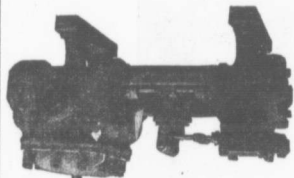
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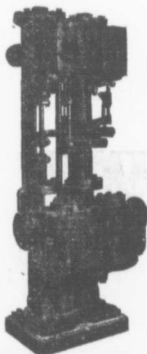
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Fairbanks Morse Duplex,
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Boiler Feed Pump.

Steam Pumps, Power Pumps, Fire Pumps.



Fairbanks Morse,
Vertical Duplex Boiler
Feed Pump, Marine Type.

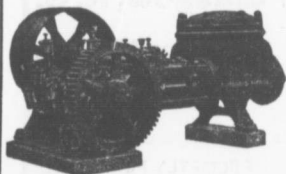
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Pumps is kept up to the highest Stand-
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All the Wearing Parts are made to Gauge and are therefore
interchangeable.

**EVERY PUMP IS THOROUGHLY TESTED
BEFORE IT LEAVES THE FACTORY.**



Fairbanks Morse Horizontal Duple Power Pump

Send for our Catalog 48c, or have our representative
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REPRESENTED BY

A. F. LYTLE, New Glasgow, N. S.

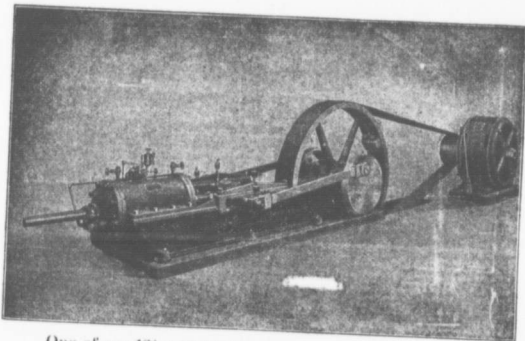
K. N. FORBES, Halifax, N. S.

G. E. Choinier, St. John, N. B.

The Canadian Fairbanks Company, Limited.

Montreal, Toronto, Winnipeg, Vancouver.

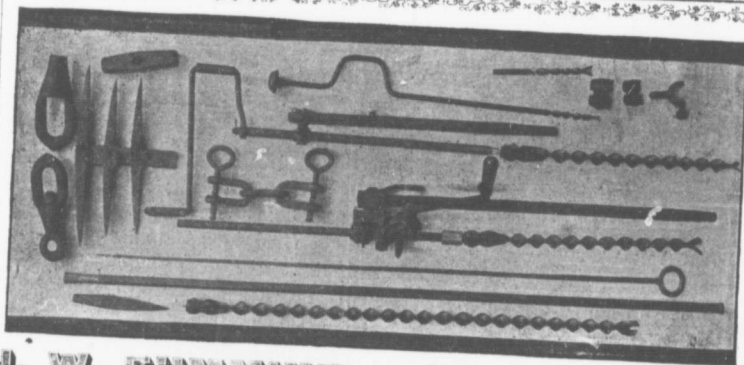
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One of our 12 $\frac{1}{2}$ x 18 Air Compressors driven by a 50 h. p. Induction Motor, and supplying power for a Manitoba quarry. For different uses of compressed air see Catalogue 75 F.

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New Glasgow, N. S.

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Miners High Grade Tools.

Augers, Mauls, Wedges, Copper Needles, Tamping Bars, Cones and Swivles for Wire Ropes, Drawbars, Mountings, all kinds of forgings for Pit Machines

Boring Machine Parts always on hand.

Any Kind of Pick to Order.

ESTIMATES PROMPTLY FURNISHED.



Synopsis of Canadian North-West. Homestead Regulations.

ANY even numbered section of Dominion Lands in Manitoba or the North-West Provinces, excepting 5 and 20, not reserved, may be homesteaded by any person the sole head of a family, or male over 18 years of age, to the extent of one quarter section, of 160 acres, more or less.

Application for homestead entry or inspection must be made in person by the applicant at the office of the Local Agent or Sub-Agent.

An application for entry or inspection made personally at any Sub-agent's office may be wired to the local Agent by the Sub-agent, at the expense of the applicant, and if the land applied for is vacant on receipt of the telegram such application is to have priority and the land will be held until the necessary papers to complete the transaction are received by mail.

In case of "persecution" the entry will be summarily cancelled and the applicant will forfeit all priority of claim.

An applicant for inspection must be eligible for homestead entry, and only one application for inspection will be received from an individual until that application has been disposed of.

A homesteader whose entry is in good standing and not liable to cancellation, may, subject to approval of Department, relinquish it in favor of father, mother, son, daughter, brother or sister, if eligible, but to no one else, on filing declaration of abandonment.

Where an entry is summarily cancelled, or voluntarily abandoned, subsequent to institution of cancellation proceedings, the applicant for inspection will be entitled to prior right of entry.

Applicants for inspection must state in what particulars the homesteader is in default, and if subsequently the statement is found to be incorrect in material particulars, the applicant will lose any prior right of re-entry should the land become vacant, or if entry has been granted it may be summarily cancelled.

DEBITS.—A settler is required to perform the conditions under one of the following plans:—

(1) At least six months' residence upon and cultivation of the land in each year during the term of three years.

(2) If the father or mother, if the father is deceased, of a homesteader resides upon a farm in the vicinity of the land entered by such homesteader, the requirement as to residence may be satisfied by such person residing with the father or mother.

(3) If the settler has his permanent residence upon farming land owned by him in the vicinity of his homestead, the requirement may be satisfied by residence upon such land.

Before making application for patent the settler must give six months' notice in writing to the Commissioner of Dominion Lands at Ottawa, of his intention to do so.

SYNOPSIS OF CANADIAN NORTH-WEST MINING REGULATIONS.

Coal. Coal lands may be purchased at \$10 per acre for soft coal, and \$20 for anthracite. Not more than 320 acres can be acquired by one individual or company. Royalty at the rate of ten cents per ton of 2800 pounds shall be collected on the gross output.

QUARTZ. A free miner's certificate is granted upon payment in advance of \$5 per annum for an ind. claim, and from \$20 to \$100 per annum for a company according to capital.

A free miner, having discovered mineral in place, may locate a claim 150 x 150 feet.

The fee for recording a claim is \$5.

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

The patent provides for the payment of a royalty of 1-2-2 per cent on the sales.

Placer mining claims generally are 100 feet square; entry fee \$5 renewable yearly.

A free miner may obtain two leases to dredge for gold of five miles each for a term of twenty years, renewable at the discretion of the Minister of the Interior.

The lessee shall have a dredge in operation within one season from the date of the lease for each five miles. Rental \$10 per annum for each mile of river leased. Royalty at the rate of 1-2-2 per cent collected on the output after it exceeds \$1000.

W. W. CORY,
Deputy of the Minister of the Interior.

NOTICE.

MINES OFFICE HALIFAX, N. S., June 16, 1906.

AN Examination for Granting Certificates of Competency to Stationary Engineers will be held at Springhill, Stellarton, North Sydney and Inverness, on July 17th., 1906. Applicants for certificates of service and firemen will be examined on July 18th.

Applications must be sent in not later than July 9th., to the members of the Board for each district, who can furnish any other information that may be desired.

MEMBERS OF THE BOARD.

John Harrington, North Sydney, A. F. Campbell, Inverness,
H. F. Coll, Stellarton, H. R. Groggett, Springhill

WM T. PIPES,
Commissioner Public Works and Mines.

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—

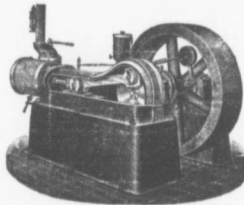
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Wholesale only,

TRURO, Nova Scotia.

NOT ONE CENT FOR REPAIRS



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as follows:—

"After eighteen months of hard service, the Robb engines are in excellent shape, running very smooth and without a bit of vibration. Up to this time they have not cost one cent for repairs, the only expense being steam, oil and packing, and this below the average. Perfect alignment, parts well machined, and good design make the Robb the most economical and labor saving engine that has ever come under my notice."

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

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....PILOT,....

CALLED

“The Prince of Pilots.”

Beyond Comparison. The Finest Pilot Biscuit Made.

ASK YOUR GROCER FOR IT.

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Contractors to H. M. Government.

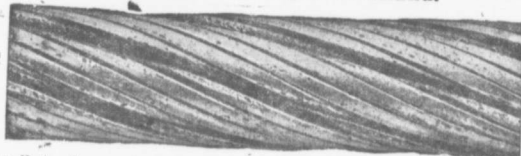
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Section of worn Haulage Rope supplied by us to Messrs Outtrim, Howitt and Irvine Consolidated Coal Company, Outtrim, Victoria, Australia, showing condition when taken off and substituted by another Rope of our manufacture. Length 7,260 feet by 4 1/2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

Manufacturers of All Descriptions of WIRE ROPES for COLLIERIES, MINES, CABLE TRAMWAYS
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Wire specially selected for our Requirements.

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SAFE AND CONVENIENT SHIPPING PORT

The Nearest Coal Port to Newfoundland

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- - J. T. Burchell Manager.

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Miners and Shippers of INVERNNESS (BROAD COVE)

Screened, Run-of-Mine Slack.

—First Class both for Domestic and Steam Purposes.—

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Time Table No. 18, Taking effect at 1 a.m. June 5th, 1905.

EASTBOUND			STATIONS.	WESTBOUND		
Read Down	No. 54	No. 54		Read Up	No. 53	No. 53
m.	p. m.	p. m.			p. m.	p. m.
L 11 10	L 3 55		P. TUPPER JUNCTION	A 10 58	A 3 56	
S 11 10	S 4 00		PORT HAWKESBURY	S 10 55	S 3 57	
A 11 20	A 4 15		PORT HASTINGS	L 10 40	L 3 10	
	F 4 30		TROY	A 10 30		
	S 4 45		CHEBONISH	P 10 20		
	F 4 55			F 9 55		
	P 5 10		CATHERINES POOD	F 9 55		
	F 5 25		PORT HOOD	L 9 50		
	A 5 30		GLENCOR	A 9 40		
	L 5 45		MAROU	P 8 45		
	F 5 58		GLENDYVE	S 8 15		
	S 6 21		BLACK RIVER	F 8 05		
	F 6 35		STRATHLOREN	L 7 50		
	S 6 50		INVERNESS	S 7 37		
	A 7 05			L 7 30		
	P 7 20			A 7 30		

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

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Miners of

SCREENED
STEAM
STOVE
SLACK

COAL,

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

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

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

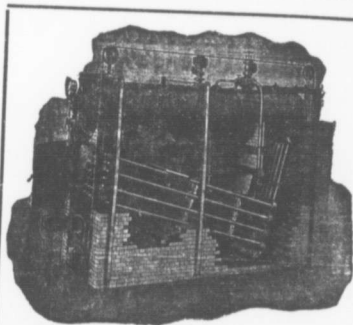
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STEEL BUILDINGS
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PATENT SUPERHEATERS

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Can be adapted to existing plants and to all types of
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Write for our Circular giving detailed description.

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Asbestos Cement, Blacksmith Bellows,
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These are only a few of the many supplies we
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BARRISTER, SOLICITOR, ETC.

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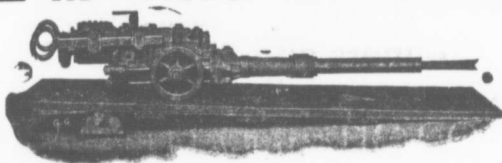
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Best all round flour on the market.
Uniform in quality. Every barrel
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"G 6" HARRISON IMPROVED COAL CUTTER.

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Successors to the plants and Water Tube Boiler business of The Stirling Company, Barberton, Ohio, and The Aultman & Taylor Machinery Coy., Mansfield, Ohio.

Manufacturers of

Stirling A. & T. Horizontal and Cahall Vertical Water Tube Boilers, Chain Grate Stokers and Superheaters.

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"Monarch," "Red-Strip" and "Lion" Brands, for Transmitting, Conveying and Elevating.

"REDSTONE SHEET PACKING"

For Highest Pressures with Steam, Hot or Cold Water and Air

The most durable and satisfactory Packing on the Market.

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CELEBRATED

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DELIVERED BY RAIL OR WATER.

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Quotations Furnished Promptly on Application.

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Unexcelled for General Use.

Shipments to all points reached by the
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Coal and Gold Mining Machinery a specialty

Endless Haulage Engines, Revolving Triples, Picking Tables and Complete Screening Plants for the Cleaning and Picking of Coal. Rope Wheels, Pumps, Valves, Shafting, Belting Etc.

Complete equipments furnished for Coal or Gold mines.

Screening plants are now in operation at Sydney, Springhill, Broad Cove, Port Hood and Westville Mines

Estimates Cheerfully given.

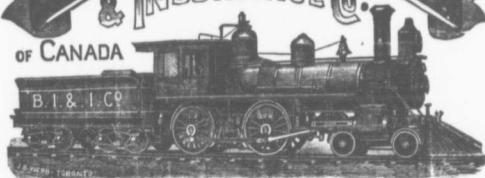
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WHEN WERE YOUR
.. BOILERS ..
... LAST INSPECTED ...

WRITE TO

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Halifax, N. S.

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**WIRE ROPE,
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**Highest Grade of Hoisting Rope made,
Extra Tensile Strength for Heavy Work.**

Use Greening's Rope Grease for Lubrication.

THE B. GREENING WIRE COMPANY, LIMITED.
HAMILTON, ONT. MONTREAL, QUE

**DRUMMOND
COAL.**

INTERCOLONIAL COAL MINING CO., Limited,
WESTVILLE, NOVA SCOTIA.

MANUFACTURERS AND MERCHANTS SHOULD ADVERTISE IN THE
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GOWRIE AND BLOCKHOUSE COLLIERIES,

LIMITED.

OF NEWCASTLE ON TYNE.

MINE AND LOADING PIERS, PORT MORIEN, COW BAY.

CAPE BRETON, N. S.

Miners and Shippers of GOWRIE COAL.

The Reputation of this Coal has Steadily Advanced during the past 40 years and the Output of the new Mine is fully up to the old Standard of Excellence.

Especially designed Piers for the rapid delivery of coal into Vessels by Roe and Bedlington's Patents.

OFFICES:—Canada, Port Morien, Cape Breton, Nova Scotia. England, Newcastle on Tyne.

The JOHN McDOUGALL Caledonian Iron Works Co., Ltd.

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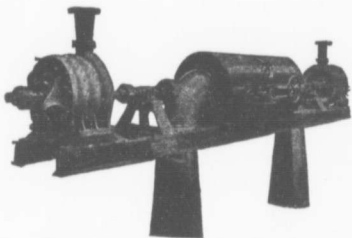
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PUMPS

Worthington Pumps for
Water Works and Mines.

Water Wheels

Doble Water Wheels for high heads.]



Two Worthington 3 stage Turbines and McCormick Water Wheels, built for Port Arthur, Ontario, Water Works. Combined capacity 1440 gallons per minute against 350 head.

Mill Machinery

Etc. Etc.

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RAILWAY AND

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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 %	23.41 %
Fixed Carbon.....	75.29 %	67.47 %	64.69 %
Ash.....	3.75 %	3.19 %	4.19 %
	<hr/>	<hr/>	<hr/>
	100.00	100.00	100.00
Sulphur.....	1.15 %	58 %	.79 %

BEST COAL FOR
LOCOMOTIVE USE.

Delivered By Rail or Water

BEST COAL FOR
GENERAL STEAM PURPOSES.

The year Round

IN Lots To Suit Purchasers.

BEST COAL FOR
DOMESTIC CONSUMPTION.

BEST GAS COAL

Mined in the Province.

Mines _____
SPRINGHILL

N. S.

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MONTREAL

Dominion Coal Company, Ltd.

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

—Yearly output 3,500,000 tons.—

ANALYSES.

ANALYSES OF GAS AND STEAM COAL MADE BY J. & H. S. PATTINSON, CHEMISTS, 1
 —NEWCASTLE, ENGLAND.—

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

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

Shipping facilities at Sydney, and Louisburg, G. B., of most modern type. Steamers carrying
 —6000 tons loaded in 24 hours.—

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

::: BUNKER COAL :::

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

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

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

ALEXANDER DICK Genl. Sales Agent, Glace Bay, N. S., Can.

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G. H. DUGGAN,

2nd. Vice President