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New Series Vol. 9 No. 1 July 10th. 1907 STELLARTON, N. S.

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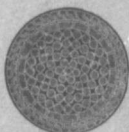
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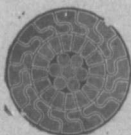
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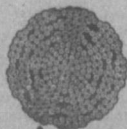
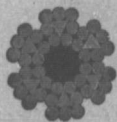
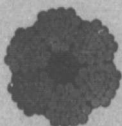
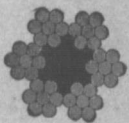
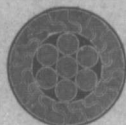
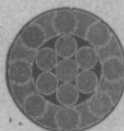
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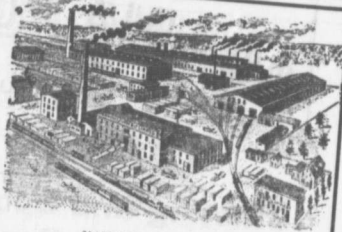
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62 Mixed for Pictou	7.40
56 Mixed for Mulgrave	8.54
19 Express for Sydney	8.59
19 Mixed for Pictou	10.55
56 Mixed for Truro	11.00
83 Express for the Sydneys	13.35
83 Express for Halifax and Montreal	15.45
140 Mixed for Pictou	16.01
101 Mixed for Pictou Landing	16.05
21 Mixed for Hopewell	16.55
56 Mixed for New Glasgow	18.10
17 Express for Halifax and St. John	18.45
17 Express for New Glasgow	19.50
66 Express for Pictou	21.15

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79 Mixed from Hopewell	6.30
61 Mixed from Truro	6.55
18 Express from New Glasgow	7.30
21 Mixed from Hopewell	7.45
56 Mixed from Truro	7.55
28 Mixed from New Glasgow	8.20
27 Mixed from Pictou	9.35
56 Mixed from Mulgrave	10.40
129 Mixed from Halifax and St. John	13.15
39 Express from Pictou and St. John	13.30
92 Mixed from Sydney	13.35
77 Mixed from Pictou Landing	15.50
60 Mixed from Hopewell	15.55
56 Express from the Sydneys	18.40
56 Express from New Glasgow	18.45
17 Express from St. John and Halifax	21.05
17 Express from Halifax and St. John	21.10

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O'clock is mid-night, Monston, N. B. June 15th, 1907
Parlor Cars between Halifax and Sydney. Dining Car
on No. 63 train between Halifax and Mulgrave, on No. 39
train between Mulgrave and South River, on No. 39 train
between South River and Mulgrave. On 31 train between
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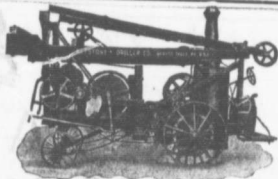
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It can be used in connection with any good "churn" drill, but operates best on the long stroke KEYSTONE, thus making the cheapest and quickest method of boring to be found.

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 "rock" water wash, diamonds, shot, and heavy operating mechanism.

Price of Complete Attachment
\$200.00

Catalog No. 2 B. is a book on the subject.
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Keystone Driller Co. Beaver Falls, Pa.

ONE MAN'S VIEW. A well-known mining man recently finished an inspection of the fields of Anthracite coal in Pennsylvania. When asked what impressed him most, he said:

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

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Minerals other than Gold and Silver.

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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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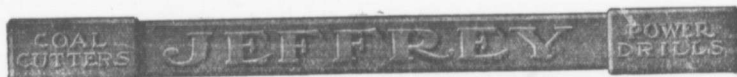
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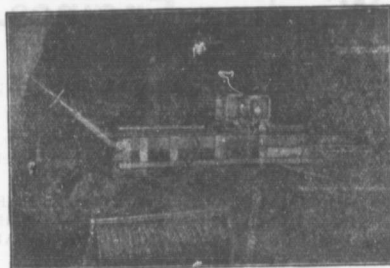
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REPRESENTATIVES

PEACOCK BROTHERS CANADA LIFE B'LG
MONTREAL, P. Q.

Important Notice.

The Maritime Coal Ry. & Power Coy., having taken over on June 1st, the Joggins Mine and Ry., and are starting at once on opening a new slope and doing large repairs. They want **ONE HUNDRED MINERS AND LABORERS AND TWENTY CARPENTERS**. Apply at Joggins or Chignecto.

Reliable crop reports from the Canadian west are optimistic for another year of plenty in cereal production. The aggregate acreage will probably be in excess of last year owing to the large number of newcomers settling in Alberta and Saskatchewan. The acreage in Manitoba is slightly lower than that of a year ago, but it is sufficiently offset by the increase in the other two western provinces.

70th...
MARITIME MINING RECORD

Vol. 10, No. 1. Stellarton, N. S., July 10th. 1907. New Series

A CHALLENGE TO ACCEPTED AUTHORITIES
 ON VENTILATION.

At the examinations for mine officials in 1906 a question on ventilation was propounded, which was rightly answered if the formula of those considered authorities on mining subjects is correct. The veteran of the Board of Examiners and its chairman Mr. Baird takes nothing second hand, and having worked out the problem for himself in his own way refused to accept the formula or the answer as correct. Mr Baird wrote to Mines and Minerals, submitting the question, the way it was worked according to the authorities and the way it ought to be worked out. Mines and Minerals promised to insert Mr. Baird's solution but withdrew from that position giving as a reason that to oppose an accepted formula would draw down on the paper a deluge of correspondence. Mr. Baird at first thought of asking the Record to publish the full correspondence but concluded it might be more decorous to submit only the two communications he sent bearing directly on the working out of the questions. In submitting the question and Mr. Baird's answer we are authorized to challenge all and sundry, the whole mining fraternity in short to prove that Mr. Baird and not the authorities are in error. If Mr. Baird is right, and the Record does not say he is wrong, then there is not so much in splitting the air as very many mining men imagine. Mr. Baird's first answer is not so well worked out as in his second letter therefore we give both:

Ques.—"If 30,000 cubic feet of air is being produced in an airway 1200 feet long 8 x 5 ft., how many cubic feet would be produced if the air were split into three splits, the first being the dimensions given above, the second 1500 feet long, 8 x 7 ft., the third 1800 feet long 9 x 6 ft., the power remaining the same.

Ans.—"Value of K .00000001. We have first:—

$$K \times 31200 \times 750^3 = p = 4.3875$$

$$a = 40$$
 2nd. $4.3875 \times 30000 = 131625$ units of work for 3 splits, then $\sqrt[3]{131625 \times 150} = 69750$ cub. ft. ans. (as accepted)

$$K \times 130200$$

The writer objected to receive such an answer as correct, however it was proven that such formula and answer were in print by several authorities on ventilation. Mines and Minerals included, and your humble servant had to acknowledge under the circumstances that such answers be received, with the understanding it a correct answer to the question were given by any candidate that he be allowed also full marks.

To prove the question it is necessary to work out the quantity that will pass in each of the splits. By

proportion we find quantity of air is 19440 feet in first split, 28420 feet in second split and 21870 ft. in third split. Therefore we say:

$$K \times 31200 \times 486^2 = p = 1.8423 \text{ 1st. split.}$$

$$a = 40$$

$$K \times 45000 \times 507.5^2 = p = 2.0696 \text{ 2nd. split.}$$

$$56$$

$$K \times 54000 \times 405^2 \text{ eq. } p \text{ eq. } 1.6402 \text{ 3rd. split.}$$

1.8423 + 2.0696 + 1.6402 eq. 5.5521 total pressure. Use av 555 ÷ 3 = 185 gives 129'00. Again 5.5521 x 69750 eq. 387147 units of work to produce 69750 cub. ft. By calculation I find 48700 cub. ft. of air in the 3 splits to be nearer the correct answer to said question. Proportion as above we have

1st. split $K \times 31200 \times 330^2$ eq. p eq. .89638

40

2nd. split $K \times 45000 \times 314^2$ eq. p eq. 1.007

50

3rd. split $K \times 54000 \times 282^2$ eq. p eq. .79524

54

2.69862

Then 2.69862 x 48700 eq. 131422 units of work. Or more clearly worked: We have first $K \times 31200 \times 75^2$ eq. 4.3875 pres. and px 30000 eq. 131625 units of work. The next step is to find the power to produce 30'00 ft. of air through the splits.

The relative potentials: $\sqrt[3]{\frac{a}{n}}$ 1st. split: $\sqrt[3]{\frac{40}{31200}}$ eq. 1.2706 2nd. split: $\sqrt[3]{\frac{50}{45000}}$ eq. 1.5744 3rd: $\sqrt[3]{\frac{54}{54000}}$ eq. 1.4206. Total 4.2736. Then 1.2706x30000 ÷ 4.2736 eq. 8919 cub. ft. 1.5744x30000 ÷ 4.2736 eq. 11052 cub. ft. 1.4206x30000 ÷ 4.2736 eq. 10028 cub. ft. Then we have $K \times 31200 \times 223^2 \div 40$ eq. .38788, $K \times 45000 \times 197.3^2$ eq. .312, $K \times 54000 \times 185^2$ eq. .34184.

56

54

Total p eq. 1.0477x30000 eq. 31341 units of work. Then $\sqrt[3]{31341 + 131625} = \sqrt[3]{131625} :: 30000 : 27938$ cub. ft., power remaining the same, or $\sqrt[3]{31341} : \sqrt[3]{131625} :: 30000 : 48400$ cub. ft. fair. I consider 27938 cub. ft. might be taken for answer power remaining the same.

MINING EXAMINATION.

An Examination for granting Certificates of Competency to Managers, Underground Managers and Overmen, will be held at Stellarton, Macan, Sydney and Mabou, beginning July 23rd. 1907.

All applications for Examination and necessary testimonials must be in the hands of the Secretary, at Halifax, not later than July 12th. Further information as to place of examination, etc., can be obtained on application to the Local Board,

E. Gilpin, Jr.,
 Secretary Board Examiners.

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 \$1.99 a year.

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R. DRUMMOND, PUBLISHER.

STELLARTON, N. S.

JULY 10

COAL MINING IN NOVA SCOTIA.

Though the general public, owing to the greatly enlarged production of coal, might come to the conclusion that there are many more collieries in Nova Scotia than in the earlier history of the coal trade, the opposite is really the case. Before the Duke of York's monopoly was broken in 1857—fifty years ago—there were six mines in operation in three counties of the province, Pictou, Cumberland and Cape Breton, whereas between that time and ten years later returns were made from no fewer than thirty-six mines, in six counties, Cumberland, Pictou, Cape Breton, Inverness, Richmond and Victoria. A few years ago what seemed to be substantial reports were spread around that coal seams varying in thickness from two to six feet had been discovered in Antigonish by Mr. McBean and others. These claims were modest compared with some put forth forty years or so ago, when it was given out that in that county seams had been discovered from two to nine feet in thickness. In 1866 there were five mines in operation in Cumberland county: Joggins, Victoria, Macan (spelled with one c in all the earlier references), Chignecto and St. George. In Pictou the Albion (two shafts), Acadia (three slopes), Nova Scotia, Bear Creek, German, Montreal and Pictou, and McBean were all in operation in 1867. In Inverness, in the same year, the Port Hood slope was down three hundred feet, and there was little doing at Chimney Corner. In Victoria county two collieries, New Campbellton and Black Rock, were working. In Richmond county, in 1866, the Richmond and Seal Bay coal mines were worked. They were both closed down in 1867. Then, as now, for the number of its mines, Cape Breton took first place. Here is a long list of mines working in 1866: Matheson (Bras d'Or), Sydney, Ingraham, Lingan, International, Caledonia, Little Glace Bay, Acadia, Clyde, Schooner Pond, Block House, Gowrie, Mira Bay, and South Head, to which there was added in 1867 the Victoria and the Collins. The deepest shaft at

that time was the Albion, 840 feet, and the longest slope, Lingan, 600 feet, the next largest being the Acadia, 550 feet. The Albion took first place, in three years, as a producer, Sydney Mines second and Block House third. While it was in operation the Block House, considering its disadvantages, was a wonder. If it had a short life it had indeed a merry one. If I have said elsewhere that John Rutherford was the first inspector of mines, that is scarcely correct, as from 1858 to 1860 Mr. J. M. McKeagney acted in that capacity. The Crown Lands Department took charge of the mines in 1861, until 1864, when the Department of Mines was formed, and the office of inspector re-established. Mr. Rutherford, as inspector, made his first report in 1866.

Prof. How, in his Mineralogy of Nova Scotia, says that the productive coal measures in Nova Scotia are found in Hants and Colchester as well as in Pictou and Cumberland in Nova Scotia proper. As yet neither of these counties has contributed to the expansion of the coal trade. Though a little coal has been mined in Colchester, it is not yet a coal producing county. In 1866 there was as big a license to search boom on as in the nineties, when one could not stick a pin point, on any coal producing counties, which had not been covered.

The number of applications in 1866 for search rights was close on four hundred. In 1858, the first year of the working of the "New Mines" under the act, only 2,325 tons were raised from eight of these, while the General Mining Association raised 224,000. The G. M. A. was the largest producer until the sixties, when the new mines became the chief factors. There was a check to the progress of the trade in 1866, due to the abrogation of the reciprocity treaty entered into in 1854. This loss of market had the effect of stimulating the search for new markets, and, gradually, these were found. The United States as a market cuts a small figure at the present time. Forty years ago there were a sufficient number of collieries opened to supply the demand of the present time, had such existed. In an article, in the Transactions of the Nova Scotia Institute, Mr. Haliburton says: "Nova Scotia collieries now opened, or in preparation, would raise in five years five or six millions annually, and the supply could gradually be increased to meet the demand, however great." In view of this statement those of us who are inclined to be a little cocky and clap our own shoulders, feel quite umble. There was no demand; that was the trouble after 1868, and was the chronic ailment until late years. The famous Ford seam, or perhaps main seam, has ever had the characteristic of varying in height. Some late measurements placed the thickness at over

forty feet. In 1853 Mr. Poole, the then agent of the G. M. A., sent a continuous section, of the main seam, to New York, which showed a thickness of 38 feet 6 inches. Twelve years later a section was sent to the Dublin Exhibition, the height, or thickness, of which was labelled 35 feet 6 inches. In 1867 Mr. Hudson sent a column 37 feet 10 inches in height, thus beating his immediate predecessor and coming ten inches within reach of Mr. Poole's specimen.

To hear some people talk, these days, one is almost inclined to believe that in the sixties, and subsequently, coal could be had almost for a song. Considering the much bigger wages now, and the greatly increased cost of materials, coal is not any dearer now than then. The price of coal at the collieries, or say f. o. b., was, in the sixties, \$2.00 to \$2.50 for round, and about \$1.00 for small. In these days the Albion mines and Sydney mines coal commanded the highest price. But a miner could not earn on an average a dollar for every three he can earn today. In 1867 the royalty from coal was only \$52,000. Previous to 1865 royalty was payable yearly; it is now payable—I won't say paid—quarterly. In the old days they made as many new discoveries—that never were visible in day—and told as many stiff yarns as the people of the present. For instance, we are told that the Acadia seam is 20 feet in thickness and that it is one of the finest seams of coal in the world. "With the exception of three inches of fire clay, there is no foreign matter of any kind, no impurities, and that the three inches of fire clay are no disadvantage but afford a parting for the miner to hole in." If there is 19 feet 9 inches of clean coal, how is it that an ordinary prop reaches from pavement to roof? We are always learning.

And then there is the reference to the Sea Bay coal of Richmond. This coal has one, only, of the characteristics of the Mullins, which has been lost and found and lost again and again found. The six foot Sea Coal Bay seam has been lost, and, diligent search for some years, has not discovered its hiding place. Of this coal it was said in 1864: "The large bed of coal on which the government received an unfavorable report some years ago, has been explored by means of a shaft to the depth of 55 feet, and at that depth the lead is found to improve so much that at least six foot of good clean coal may be mined from it," and "there is another important feature in this coal field. The beds are found to improve greatly in their quality the further they are followed along their strike to the south-west and also to the dip."

When the oil fields of Pennsylvania, Ohio and Ontario give out then may come Antigonish's opportunity. If there is not coal in that county there is, there seems no doubt, large

areas of oil shales. Mr. J. C. Campbell, an old time geologist, says: "The fact that the centre of the Antigonish basin is occupied by highly bituminous lime stone overlying the oil coal and oil shale beds, may possibly indicate that the whole group is upper devonian, or lower carboniferous, rocks which are not known in this country to contain coal beds of any value. 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 camel rich in oil. Of this great bed of oil batt, about 30 feet in all probability will yield from 20 to 25 gallons to the ton. The five feet seam of curly camel 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 a gallon at the shipping port there are, in all, three hundred and seventy million, five hundred and thirty-three thousand, three hundred and twenty-five dollars' worth of oil which can be obtained from 20 feet in thickness of strata underlying 2,000 acres of land—out of 18,000—comprising a basin underlaid by at least fifty feet in thickness of beds rich in oil." And yet they tell us that word painters spring to being with Cobalt. Why, man alive, our J. Campbell could beat them all. No wonder Antigonishers are proud. Multiply the three hundred and seventy millions by nine, the whole field being that many times more than 2,000 acres, and then multiply by two and a half, the thickness being that much greater than that on which the calculation was based, and we have eight thousand million dollars' worth of oil in Antigonish, the price being 25c. a gallon. Suppose we put the price at ten cents a gallon, in order to meet Standard Oil competition, there is still oil in Antigonish to the value of three thousand three hundred and seventy million dollars. Antigonish county should be able to sell municipal bonds at fancy prices. She has a bewildering asset. Do you grasp it? \$3,370,000,000! I do not believe one-quarter that amount will ever come out of Cobalt. Some of those who were with us in the sixties must have been "great altogether" in framing prospectuses.

Peat has not, so far been declared a mineral; if not a mineral it is the next thing to it. We have peat in Nova Scotia. Hitherto it has not been cut, even for fuel, but it may become of commercial value in the future, as a process has lately been discovered of extracting alcohol from it. Anything that contains alcohol, generally has a run upon it, and this may turn out the case with peat. Peat is said to exist in Halifax, Guysborough, Kings, Inverness and Victoria counties. As to the depth of the bogs and the quality of the peat, nothing is known.

- Rubs by Rambler.

Looking over some clippings the other day, which I had set aside as likely at some time to form texts on which to offer remarks, I came across the following written for the Montreal Standard a year ago:

You would think that the eternal darkness of the pit would make men miserable and morose. Instead, the men whose lives are spent in perpetual gloom are bright, light-hearted and eminently content with their lot. In winter time they see the light of heaven only on Sundays; for during six days it is dark when they go to their work and dark when they return; that is—if they return; for from the moment they step into the cage that is to take them down into the dark mine they put themselves within reach of death in a million forms."

No doubt the paragraph was written from the best of motives—to excite sympathy and consideration for those who toil for their living in the bowels of the earth, to produce fuel to keep the wheels of machinery in motion, and to supply fire and heat for the comfort of householders, not to further specify the objects to which coal is indispensable. There is no doubt that coal mining is a hazardous occupation, but it is not the most hazardous, and, after all is less arduous than many other occupations. It is rather an exaggeration to say that men who go down into a mine "put themselves within the reach of death in a million ways." The fact is that the dangers to which miners are exposed could all be expressed in two figures instead of five, and one figure would suffice for the common dangers which are of most frequent occurrence in a mine. One scarcely boards a train, and yet there have been innumerable more deaths from accidents on railways in the United States alone the first six months of 1907 than in all the coal mines in the world during the same period. I admit, of course, that there is no comparison between the number of passengers carried on trains and the number of men employed in coal mines. It should not, however, escape observation, though it is not generally so accepted, that accidents on railways, and even fatal accidents in the forest, are more numerous in proportion to the number chiefly employed than in the mine. What I chiefly object to in the paragraph quoted is the fiction about the miners never seeing the light of the sun, or rather the light of heaven, except on Sundays. The writer of the paragraph should not have delved into ancient history to

prove that present day conditions are lamentable. The diligent miner who works six days a week—and how few we have of them—does not, it is true, see the morning sun in the winter months, but ten to one he sees the afternoon light of heaven every day in the week. The lot of the miner these days is not so hard as one after all, and the miners do not wish an one after all, and the miners do not wish it for the last calling on earth one would select from choice. Not by any means. Many, indeed I may say a majority of miners, are in love with their calling and would not "swap" it for another, even a more lucrative employment—if there is any such at this time.

Whatever coal mining may have been in the past and in other countries, today mining is as respectable, comfortable and as well paid employment as any in which strenuous manual labor is required. If in other countries, fifty years ago, miners were not the best behaved of citizens, today in Nova Scotia, as a whole, they are as good citizens and neighbors as those of any other class or occupation. If fifty or sixty years ago the miner was rather severely dealt with, kept down, there has been a terrific rebound, for instead of being down it is not far on top. He is pretty much his own master and pretty much as he likes, works when he will, hard or easy as he wills, and plays when he wills, and this he wills to do at short intervals. In sober truth a miner's work may be arduous, but it is not disagreeable, nor is it more hazardous than some other occupations which have in the past not been accounted as among the dangerous.

In Pennsylvania, so I notice in the Coal Trade Journal, a use has been found for the huge refuse banks which disfigured the surface at the anthracite mines. Says the Journal:

"A number of years ago there was much comment relative to the great culm piles throughout the anthracite region, and much speculation was indulged in as to whether they would ever be utilized or disposed of in any way. Now the comment seems to tend in the other direction, and it is suggested that the culm piles may soon disappear. The useful portions of them are being screened out rapidly and shipped to market, while the unavailable material is being, in a number of cases, turned back into the mines and used to fill up abandoned gangways. The material thus put back into the mines can be packed in very solidly, as the head of water under a pressure of several hundred feet has a great deal of force. After the gangways have been filled up for a number of years, the material becomes sufficiently compact to allow of the intervening columns, which once formed the walls of the

gangways, being mined with as much safety as operations are conducted elsewhere in the mines. This, of course, adds to the available tonnage of hard coal, and the method will be made use of as time goes on and the more accessible coal becomes scarce."

In the seventies and eighties, and well on in the nineties, big banks of slack coal might be seen at the Nova Scotia pits and piles of it along the railway tracks. All this has been changed within the past ten years. Instead of being a drag on the market slack coal is in brisk demand, and whereas it was worth only about twenty-five cents twenty-five years ago, it is now worth off and on about two dollars a ton, and scarce at that. Indeed, twenty years ago, at many of the collieries slack coal was dumped on the stone heaps as valueless. Indeed, it was to the operators a bill of expense. The experiment of sending back into the pits, as in Pennsylvania, was never tried; it was disposed of to more advantage. At Springhill in the late seventies they tried to find a market for slack by washing it. The washer of those days was of the primitive sort. It consisted of troughs, leading from the rotary screens to pockets three or four hundred feet distant. The coal was led into the troughs, and the pit water utilized to carry the coal to the pockets. The stone and sediment was caught by small pieces of wood laid in the troughs at right angles, and was shovelled out at intervals. It was by no means a perfect washer, but its product found a ready sale, where the unwashed slack was unsaleable. Modern washers are in operation at several of the collieries. The slack from these is used chiefly in the production of coke, for which at present there is a great and increasing demand. Springhill slack is in good demand for lime burning purposes.

Some people run away with the idea that a reason why there are so many people poor is that there are so many rich. Poverty, they say, is the result of an unequal distribution of wealth. Poverty, in the ordinary acceptance of the word, is due to nothing of the kind. In a majority of instances it is due to sloth, to self-indulgence or thriftlessness. In the minority of cases only is it due to misfortune, or to circumstances over which the poverty-stricken had no control. The cry of a section of the Socialists is for a redistribution of wealth. The game would not be worth the candle. It would, too, be an everlasting job. There would require to be a redistribution once a year, if not once in six months, and then even the last state of some would be worse than the first. If it is true that "the poor you have always with you"—mark you, I do not say it is true as the phrase is generally understood—then it must follow that the rich we shall also

always have with us. I suppose some imagine that if the wealth of the rich—of the Carnegies and the Vanderbilts and the Fricks—was made to go round our pockets all would be bulging out with money. Not a bit of it. An equal division would add very little to the wealth of the people as a whole. Britain has many rich men—indeed, for its size Britain is the richest country in the world. Britain has many peers and many paupers. Suppose the peers of the land and the merchant princes were forced to divvy up with the common people, what would follow? How much would each person receive as his share of this novel sort of "spoils system"? This question was answered in the course of an interesting paper by Mr. W. J. Harris and the Rev. K. A. Lake on the "Estimates of the Realisable Wealth of the United Kingdom, based mostly on the Estate Duty Returns," which was read before the Royal Statistical Society. Allowing for the deduction of certain government property, which could not be reckoned if the national debt were included, the total wealth of the United Kingdom was given as £8,950,000,000, which sum, if distributed equally amongst the population, would allow £207 for each person. On the basis of Mr. Money's calculations, made some time previous, it was estimated that, as wealth is really distributed, one-seventieth of the population owns far more than half of it, and that one-thirtieth of the nation enjoys more than one-third of the entire income of the United Kingdom. The estimates formed by the three gentlemen in question are interesting as showing the country's wealth. But what would £207 for each person produce per annum if safely invested? If placed at a fair rate of interest it would give £7 per head per annum: 2s. 8d. per week, or about 4d. a day—rather a poor old age pension upon which to retire. But if such a divide really ever did take place, there would be many strange romances, aye, and tragedies, too. Some men would squander their money in a week; the "fast set" would have to give over bridge and exercise their brains, provided they had any; and the Socialists would perhaps find that a "fair divide" was not after all such a sure way of solving the social problem as they at one time imagined. The problem of wealth is almost as big a problem as that of poverty. The poor may not be getting poorer, nor the rich richer. There may be fewer poor today than formerly; there certainly are more rich, for, whereas fifty years ago there were not more than fifty millionaires (dollar millionaires) in the whole of the States, and their combined fortunes did not exceed £20,000,000, or one per cent. of the aggregate wealth of the nation, in the space of 34 years the combined fortunes of this class amounted to £7,300,000,000, or 56 per cent. of the national wealth, while today 1 per cent. of the population owns practically 90 per cent. of the entire wealth of

the nation.

From the fuss made over the passage at Ottawa at the last session of the Industrial Disputes Act, one might be led to suppose that this is the first time a measure of the kind was introduced into Canada. To hold such a view would be erroneous. Nigh a score of years ago the Nova Scotia Legislature passed a disputes bill, which, if anything, is much more drastic than the Lemieux bill. Of course it is not so comprehensive, in a sense, as it only deals in disputes between miners and their employees. It is rather curious that some mine operators rejoice at the passing of the Disputes Bill who ignored wholly the benefits possible from an application of the "Miners' Arbitration Act." As between the two bills, and as applied to mining disputes, I have no hesitation in saying that given the ghost of a chance the Nova Scotia bill is better than the other. Indeed, I claim for the Nova Scotia act that it was the first act of the kind that was passed in a civilized country. It was, if I am not greatly in error, enacted earlier than the New Zealand act of which we are continually hearing so much. The Nova Scotia act had very different treatment in its infancy from that given the federal bill. It was promoted by the workmen, and probably on that account was looked upon with suspicion by the operators. The first attempt to test the merits of the act was a failure, for the application of the men to the commission was set aside by an application for certiorari. When this was done the workmen did not follow the matter further. Later the act was tested on application of the Dominion Coal Co., if I am not mistaken. Both sides in this instance were agreeable to the differences between them being left to arbitrators. The course did not go in favor of the men, and of course fell into a little disfavor. And yet the decision of the board, or rather the reference in the first place to arbitrators ensured peace for a year. The company through the board assured the men that an increase in wages would follow an increase in profits, and the increase came. Though the decision was not in favor of the men they abode loyally by its terms. In the seventeen years during which the act has been on the statute book, these two were the only occasions on which the act was invoked. Luckily in the past twenty years, at no necessity for any arbitration act. The differences that arose were never so serious that they failed of settlement by amicable conference. So far as mine workers are concerned, I cannot perceive where the superiority of the federal Disputes Bill over the Miners' Arbitration Act comes in. The preliminary proceedings are to all intents and purposes the same, and the board proceeds to work in the one case on similar lines to the other. There is a little

difference in the constitution of the boards. The federal act calls for three arbitrators, the local act for five. If in the multitude of counsellors there is wisdom, then the advantage lies with the latter. In one respect at least I think the local act has an advantage. If the commissioner is of opinion that the matter complained of is not a matter for arbitration he may stay proceedings. The Department of Labor on the other hand cannot well refuse to put the act in operation on application. The refusal of the commissioner to refer a matter to arbitration would be a decision in favor of the defence, and would of course only give that decision when he was convinced that the side making the application had no case. There was nothing to hinder the Nova Scotia Act of 1890 being improved and amended if so thought desirable. The federal act comes from a bigger legislative body and perhaps on that account has a bigger prestige. In order to show that there is no material difference in the scope of the acts let me give two or three sections from the Nova Scotia act.

3. When any dispute arises between the employer and a majority of the employed, or the majority of any division, in respect to wages, the employed shall not strike or abandon work and the employer shall not reduce the wages, dismiss or lock out the employed, or any division of the employes, or a majority of the employed, or the majority of any division, makes complaint in regard to the matter causing such dispute, in writing to the commissioner until such matter is finally determined as in this chapter provided.

4. A certificate under the hand of the chairman and secretary of a meeting duly called that a majority of the employed or of any division attending such meeting was in favor of arbitration under this chapter of any such dispute, shall be sufficient complaint to the commissioner.

(Note.—I consider this section preferable to a similar section in the Disputes Bill, which requires a statutory declaration in addition to the certificate of the chairman and secretary.)

5. The commissioner, upon receipt of such certificate, or upon receipt of complaint from the employer, may summon the agent of the employed or of the division, or of the employer making such complaint, to appear before him and adduce evidence in support of such complaint, and upon such evidence the commissioner shall determine whether such matter of dispute should be referred to arbitration or not.

7. When the employer and a majority of the employed or of any division apply jointly in writing to the commissioner to settle any such dispute by arbitration the commissioner shall forthwith refer the matter to the board. (Note the circumlocution here.)

8. The board shall consist of five persons, two of whom shall be appointed by the govern-

nor in council, one by the agent of the employed or division who are the other party to the dispute and one by the persons appointed by such agents.

10. The board may compel the attendance before it of witnesses by subpoena, etc., etc.

The local act consists of 32 clauses, a sufficient number.

The year 1873 was a remarkable one in the history of the coal trade of the provinces, indeed it may be said of the whole world that prices ruled very high. That year is spoken of as the year in which the British miners smoked cigars and drank champagne. Trade was very brisk in Nova Scotia, and it was no unusual thing for a man to earn \$100 for a month's work in the mine. That is no unusual wage now, but it did not come every month at that period. In 1873 Nova Scotia gave Britain a little tit for tat and managed to send across some seven thousand tons of coal. That year also Nova Scotia made big shipments comparatively to the West Indies, the quantity sent being 54,000 tons. The year is also to be remembered, sadly, as the one in which the explosion of the Drummond took place. About two months previous to the explosion Mr. Richardson said to Mr. McLeod, in whose place the fire, resulting in the explosion, originated: "There must be no more powder used in this level," as the day before the low level had caught fire from a shot. Robert McLeod replied: "I will not work in it then," and because Mr. Richardson was not empowered to give increased price for wedging, powder continued to be used, and the result we all know. What a pity the order to use no more powder was not enforced. The explosion of 1873 was the greatest that had occurred up to that time on this side of the water, but not the greatest since, as both in the United States and the provinces there have been more disastrous ones. The Drummond explosion will, however, always rank as one of the most appalling. No great outbursts of flame or smoke gave indication at the Ford pit or at Springhill of the terrible havoc that had been made in the mine. At the Drummond the smoke rolled out in great volumes, and there were after explosions far more terrifying than the first, though they were not so disastrous to human life. One particularly sad thing about the Drummond explosion was the sacrifice of the lives of a band of noble volunteers who attempted rescue work. After the Drummond explosion there was no demand for more rigid mines regulations. The men at that time were not organized. After the Ford pit explosion there was a demand for improved mining legislation, and such was secured through the instrumentality of the P. W. A. This legislation did not of course stop all sacrifice of life, but there is no question as to its having rendered work in the mine more secure and more comfortable.

The Nova Scotia Steel & Coal Coy. in the beginning of the year set apart a sum sufficient to build about thirty miners cottages, but subsequently abandoned the idea of building so many, and concluded to build four or five only. Instead of building on its own account the company thought it best to afford the employees an opportunity of building for themselves. In some cases the company not only gave free sites, but to men who were industrious and showed a disposition to become their own landlords they offered to advance funds. If a man had saved a hundred or two hundred dollars and expressed a desire to build a house the company would advance six or seven hundred dollars. If he had saved four or five hundred then an advance of say nine hundred dollars would be guaranteed. A number of the men took advantage of this most generous offer, so that at the present time it is a toss up as to whether Sydney miners or Springhill possesses the largest number of houses owned by workmen. And it is worthy of note that when the company has advanced money it has allowed the workmen to prepare his own plan, the company reserving the right to modify it only in the event of the plan being a monstrosity.

MINING AS A HAZARDOUS OCCUPATION.

That mining, as was stated in The Record a while ago, is not the most dangerous of occupations is borne out by statistics compiled by the Labor Department. No one thinks of pitying the lumberman, or saying that as he lifts his axe, to go into the woods, he takes his life in his hands, and goes to face dangers seen and unseen. In the public mind lumbering is not considered a peculiarly dangerous occupation, and, yet, judging by the fatalities, it is the most dangerous of all. The number of persons engaged in lumbering in Canada is given as 16,438. In March and April of this year 18 persons met death by accidents in the woods. A life was lost lumbering for, say, every 900 men employed. The number of men engaged in mining is put down at 23,898. In March and April of this year there were 21 mining fatal accidents, or one life was lost for every 1,136 men employed. One would imagine that if any class were immune from serious accidents they would be farmers. Farming is looked upon as the healthiest and the least hazardous of occupations, and yet what is the fact? Thirty-eight persons engaged in agriculture lost their lives in March and April from one cause or another. Of course, as there are many more engaged in agriculture than in mining, the fatalities do not show so large an average; still the loss of life was one for every 1913 persons employed. The fact is dangers lurk everywhere—in the forest as on the farm, and on the farm as in the mine.

Coal Shipments June, 1907.

DOMINION COAL COMPANY, LTD.

-Output and Shipments for June 1907.-

-Output-		-Shipments-	
Dominion No. 1	46 558		
Dominion No. 2	55 108		
Dominion No. 3	33 059		
Dominion No. 4	45 789		
Dominion No. 5	65 231		
Dominion No. 6	19 898		
Dominion No. 8	21 481		
Dominion No. 9	32 436		
	319 560		
Shipments June 1907		386 571	
" " 1906		386 571	
Increase " 1907		362 011	
Shipments 6 mos. '07		24 560	
" 6 " '06		1 380 306	
Decrease 6 " '07		1 430 596	
		44 290	

CUMBERLAND RY. & COAL CO.

Shipments June 1907	34 310
" " 1906	33 259
Increase " 1907	1 051
Shipments 6 mos. '07	176 527
" 6 " '06	223 474
Decrease 6 " '07	46 947

NOVA SCOTIA STEEL & COAL CO.

Shipments June 1907	77 061
" " 1906	74 100
Increase June 1907	2 961
Shipments 6 mos. '07	240 685
" 6 " '06	264 913
Decrease 6 " '07	24 228

ACADIA COAL CO.

Shipments June 1907	30 639
" " 1906	26 873
Increase June 1907	3 766
Shipments 6 mos. '07	142 894
" 6 " '06	125 320
Increase 6 " '07	17 574

INVERNESS RAILWAY & COAL CO.

Shipments June 1907	28 062
" " 1906	18 000
Increase " 1907	10 062
Shipments 6 mos. '07	103 037
" 6 " '06	72 458
Increase 6 " '07	30 579

INTERCOLONIAL COAL CO.

Shipments June 1907	22 374
" " 1906	27 988
Decrease June 1907	5 614
Shipments 6 mos. '07	131 897
" 6 " '06	139 543
Decrease 6 " '07	7 646

RECEIPT OF COAL AT MONTREAL.

-JUNE-		1907.
N. S. Steel and Coal Co.	23 264	14 565
Dominion Coal Co.	162 333	154 603
Inverness	6 772	2 934
Port Hood	7 542	1 688
Intercolonial	3 005	6 060
Acadia	10 740	17 598
Scotch and English	213 656	197 448

The miners have been working very steady—with the exception of the racing days recently—No man able and willing to work need loose any time and this condition extends back many months and the future seems bright for a continuance of it at Springhill.

Everything about the Springhill collieries is about normal. No. 2 mine is opening out rapidly in No. 2 sinking, with not a fault or hitch in seam or system, with output steadily increasing from this section (No. 2) and being well maintained from the other sections. The only drawback is a scarcity of labor and loss of time generally, by the workmen.

Inadvertently it was stated in last issue that some trouble was being encountered by a 'fault' in the sinking of the slope at Chignecto. This is incorrect. The slope is now sinking below the 1400 feet level, and the coal is quite regular, and the present company commenced working six yrs. ago, no sign of a 'fault' on the property has been detected.

If an old brick row and two rows of old wood-en houses at Sydney Mines were demolished a stranger visiting Sydney Mines and seeing the neat houses of varying and chaste styles of architecture would not for a moment suppose that he was looking on a coal mining village.

The Nova Scotia Steel and Coal Co. are without doubt wise in their day and generation and might advantageously follow. The company at Sydney No. 3 has given free sites, without condition denomination applying. In some localities the coal companies have exacted their pound of flesh, from even the churches, and sought to make the churches believe that the sites were cheap at but that the bread which the Nova Scotia Steel & Coal Co. has cast upon the waters will return in many ways, and so will it in the case of any other company which has been equally generous, or say rather far seeing.

AROUND THE COLLIERIES.

The Eastern Coal Co. is using an undercutting machine in driving the deeps.

The haulage ropes were changed on the new bank-head at Reserve on July 1st.

Dr. McKeen of Glace Bay who has been on the sick list for two weeks is about again.

Strathcona and Minudie collieries are working steadily, getting cars in abundance.

The bridges on the Joggins railway are being repaired, and the railway itself put in good condition.

Shot lighters are now employed in all the collieries of the Dom. Coal Co. This ensures greater safety in shooting and a better quality of coal.

Springhill is surely going to test the Disputes Act as the second board has been called for. Two cases will go before this one as before the first.

The Dom. Coal Company's fire inspection committee, composed of six mine managers made their quarterly inspection of all mines last week.

A new slope is being sunk near the shore on the Joggins areas to reach the sub marine coal. The work of driving the slope will be pushed as rapidly as possible.

Much sympathy is felt for Angus R. McDonald, Underground Manager Dom. No. 6, whose eldest son Charles was killed by a runaway trip at that colliery on the 4th. inst.

The pillar work has been commenced at Inverness colliery. This is the first work of that kind, as the company wanted to have more than the mining law limit of strata before drawing pillars.

The Dom. Coal Co. intend installing the Draeger life saving apparatus at their collieries. By its use men can in cases of emergency work in the thickest smoke or gases. A sample has already been tried.

The postponed meeting of the Conciliation Board took place on the 3rd. inst. in the new Courthouse, Springhill. Both parties have been busy strengthening their line of defence. The final outcome will be of interest both to capital and labor.

Under Mr. Duggan's directions a novel plan of Dominion Coal Co's areas, showing their relation to each other, the several outcroppings, etc. has been prepared. It is made of wood, one layer representing a seam on top or a layer representing another seam. It is a work of art, and must have taken much time and care to prepare. The plan was made so that even a judge would be able to understand what it was all about, in the event of the law suit between the Steel and coal companies coming to a head.

The output for the blast furnaces of the N. S. S. and Coal Co. for June was 6000 tons. This quantity was only exceeded on one previous occasion.

The new bank head at the Reserve is all that a bankhead should be. It is as clean as a whistle and is to be kept so. There is to be no oil spilled on the floor, nor any refuse material allowed to accumulate. The walls are white washed, and the building is well supplied with electric lights.

The new machinery at the Reserve bank head was set in motion on Tuesday, and worked in a most satisfactory manner. There was only one small hitch which was soon remedied. It is very seldom that new machinery work so nicely as did that at the Reserve the first day of the connections.

The 29th. of June and 1st. of July was devoted to horse racing and other sports, at Springhill. The mines were idle on these days. Springhill is sporty, but it is to the credit of the community that the drunk man was the exception, which goes to prove that sobriety is the rule on all occasions in the town.

Robt. Robson the other day went to put down a bore hole near Point Aconi, on the only piece of the N. S. S. & Co. Coy's property which had not been perforated by trial pits and from this was woven a beautiful story about the intention of the Company to start a new mine to be known as Sydney No. 5.

The Italians lately imported by the Dominion Coal Co. are turning out to be the most desirable kind of loaders. Some of them earn between two and three dollars a day, and are always at their posts. Newfoundlands also make good loaders though perhaps not so zealous as Italians. Of course there are Italians and Italians and it is the latter kind the Dominion Coal Co. has got hold of.

Sinking of the two slopes at Sydney No. 4 is proceeding in a matter of fact and without noise manner. It is not the intention to make No. 4 a producer this year. The pit is being sunk more for an emergency pit than for any other reason. Of course if there is a big rush for coal this fall, that is an extraordinary demand, No. 4 may be called upon to add to the output, otherwise development work alone will be prosecuted. By the time there is railway connection with the main line of the company their will be a fair sized bank of coal. Sydney No. 4 will have some things peculiar to itself which are secrets as yet, but this much may be said that in the pit their will be neither horses, nor air motors, nor electric motors nor endless haulage, nor tail ropes. There will be an original system of haulage, at least original to Nova Scotia Mines.

The Standard Drain Pipe Co.,
 LIMITED.
 New Glasgow, Nova Scotia,
 MANUFACTURERS OF
 Sewer pipes, Culvert pipes,
 Flue-Linings, Chimney Tops, Etc., Etc.



Prices on Application.

WANTED, 75 MEN.

for underground and Surface work.

Best Wages Going.

Apply in person to Mines Office.

Intercolonial Coal Mining Co.
 Limited.

WESTVILLE, N. S.

June, 6, 07.

Intercolonial Railway.

Tender.

Sealed tenders addressed to the undersigned and marked on the outside "Tender for heating, Engine house, Halifax," will be received up to and including WEDNESDAY, JULY 17th, 1907, for the equipment of a 30 stall engine house and annex at Halifax, N. S., with a steam boiler plant, hot blast fan system of heating, pumps, pipes, fittings, etc, etc.

Plan and specification may be seen at the Terminal Agent's Office Halifax, N. S., and at the Chief Engineer's Office, Moncton, N. B., where forms of tender may be obtained.

All the conditions of the specification must be complied with.

Railway Office, Moncton N. B., June 27, '07. D. POTTINGER,
 General Manager

The Dominion Coal Co. is making on some days splendid outputs and on other days outputs that drag the management to the verge of prostration. The normal output should be from fourteen to fifteen thousand tons per day. On certain days, these are the days after pays—it falls almost fifty per cent below that. On several days in June the output which could well every day be fourteen thousand tons, was a little over eight thousand. Pay days and holidays play the mischief with output calculations.

Priestleys

Mohairs

— and —

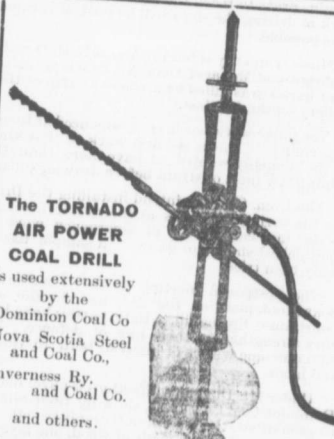
Lustres

Have Excellent
 Wearing Qualities,

WILL NOT COCKLE
 :: WITH RAIN ::

Best for _____

SPRING AND SUMMER
 SHIRT WAIST SUITS.



**The TORNADO
 AIR POWER
 COAL DRILL**

is used extensively

by the

Dominion Coal Co
 Nova Scotia Steel
 and Coal Co.,

Inverness Ry.
 and Coal Co.

and others.

Herzler & Henninger Mach. Works

Manufacturers of

H. & H. Coal Cutters & Tornado Coal Drills.

Belleville, ILL., U. S. A.

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Manufacturers of all Descriptions of

...EXPLOSIVES...

BEST QUALITY ONLY.

Blasting Powder and Compressed Pellets, Dynamite,
Gelignite, Gelatine Dynamite and Blasting Gelatine.

PERMITTED EXPLOSIVES.

For use in Gaseous mines. Suitable for all kinds of Work.

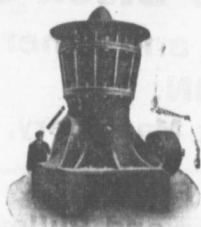
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CURTIS'S & HARVEY, LTD. HEAD OFFICE
3 Gracechurch St. London, E.C.

AGENTS FOR NOVA SCOTIA

AUSTEN BROS. HALIFAX.

HADFIELD'S STEEL Foundry Co., Limited. SHEFFIELD



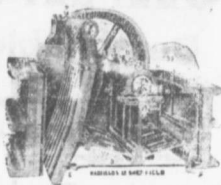
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STONE CRUSHER.



CAST STEEL
BRONZE BUSHED,
SELF OILING

WHEELS & AXLES

WE MANUFACTURE
CRUSHING ROLLS,
ELEVATORS,
and Gold Mining Requisites.



HADFIELD'S PATENT

JAW CRUSHER

(Solid Steel Construction.)

The Parts that are subject to Excessive Wear are made of
Hadfield's Patent 'Era' Manganese Steel and other Patented
STEELS.

Sole Representatives of the Hadfield Steel Foundry Company, Limited, Sheffield, for Canada,

PEACOCK BROTHERS, Canada Life Building, MONTREAL.

CHAINS. CHAINS.

(All Sizes in Stock.)

"EDGES" BEST SPECIAL CRANE CHAINS.

Cannot be Excelled for **HIGH CLASS QUALITY** and **WORKMANSHIP**.
They are made of the very best brands of English Bar Iron and by Selected Workmen.

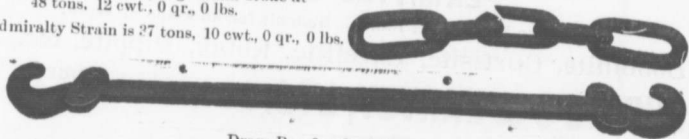
Makers of every Description of Chains
for Mining and all Engineering Purposes,

Coupling Chains and Solid Forged Draw Bars

For Mine Cars, A SPECIALTY.

This 14" Draw Bar Coupling Chain broke at
48 tons, 12 cwt., 0 qr., 0 lbs.

The Admiralty Strain is 27 tons, 10 cwt., 0 qr., 0 lbs.



Edge & Sons, Limited,
SHIFNAL, England.

Draw Bar for Coal Car.

Tel. address "Edge" Shifnal.
"Codes" A. B. C. and Bedford McNeills"

CHAIN. We carry a Complete Stock of

Detachable Link Belting and other ELEVATOR CHAIN.

Mine Elevating and Conveying Machinery,
Such as

Elevator Boots, Buckets, Gears, Friction
Clutches, Shafting, Hangers and Pulleys.

Send Us your Specifications.

The Canadian Fairbanks Co.,

LIMITED.

Montreal,

Toronto,

Winnipeg,

Vancouver.



Synopsis of Canadian North-West. Homestead Regulations.

ANY seven hundred section of Dominion Lands in Manitoba or the North-West Provinces, excepting 8 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 20 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 "persuasion" 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 particular the homesteader is a 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.

DUTIES.—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 by a homesteader resides upon a farm in the vicinity of the land entered for 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 20 acres can be acquired by one individual or company. Royalty at the rate of ten cents per ton of 2,000 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 180 ft. shaft, and from \$50 to \$100 per annum for a company according to capital.

A free miner, having discovered mineral in place, may locate a claim 150 x 120 feet.

The fee for recording a claim is \$5. At least \$10 must be expended on the claim each year or paid to the mining recorder in lieu thereof. When \$50 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 2 1/2 per cent on the sale.

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 leases 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 2 1/2 per cent collected on the output after it exceeds \$10,000.

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

EMPIRE TRUST CO.

Head Office
187 Hollis St., HALIFAX

Advantages over Individual
Trusts—
Permanency. Absolutely Confidential
Trust not impeded by failure or
dishonesty. It does not matter
Equipment for safeguarding securities.
Apply to Bank of N. S. for folders.

Miners Wanted To Chew BULL DOG TOBACCO,

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

TRY IT!

The St. Lawrence Tobacco Co., Ltd.

—Montreal—

—W. B. Reynolds, Halifax Representative—

Brick! Brick!

The Westellar Terra Cotta Company

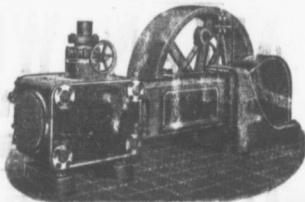
having taken over the business of the Stellarton
Brick and Tile Co'y, and having installed more
powerful and modern machinery, WILL BE
PLEASED TO HAVE ENQUIRIES AS TO
PRICE AND QUALITY.

Works — SYLVESTER

Head Office — STELLARTON.

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

ROBB POWER PLANTS.



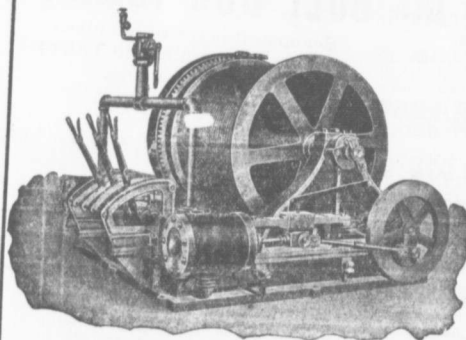
We design and contract for steam power plants
and maintain an experienced and thoroughly
practical engineering staff that is at the service
of our customers.

CORLISS ENGINES.
HIGH SPEED VERTICAL ENGINES.
MEDIUM SPEED HORIZONTAL ENGINES.

ROBB-MUMFORD BOILERS,
RETURN TUBULAR BOILERS,
WATER TUBE BOILERS.

Robb Engineering Co., Limited,
AMHERST, N. S.

"Lidgerwood" Hoisting Engines.



This is a view of our combined friction driven and brake and reversible link motion hoisting engine. The most economical for mining purposes ever built.

We are the exclusive builders in Canada of the "Lidgerwood" Hoisting Engines, the standard of the world for mining and general contracting.

Works, Montreal.

Branch Office, New Glasgow

Allis-Chalmers-Bullock, L't'd.

Contractors to Admiralty and War Office, also Colonial Governments.

ALLAN, WHYTE & C'O'Y.

Clyde Patent Wire Rope Works,

Cablegraves:

"Ropery Rutherglen,"

Rutherglen, Glasgow, Scotland.

Cables, A. B. C. (4th & 5th Eds.)
A. L. Listers and Private.

Wire Ropes

for
Winding & Haulage
in
Collieries and Mines.

Aerial Ropeways, Suspension Bridges, etc. Specially
flexible for Ore & Coal Discharging Cranes, Winches, etc.

The Nova Scotia Steel & Coal Co., Ltd., who use our Ropes largely, write that one of our Haulage Ropes at Wabana Mines has been in service for over 5 years, drawing over 1,750,000 tons in that time and is still good for further considerable service.

Agents in Nova Scotia:—**Wm. Stairs, Son & Morrow, Ltd., Halifax.**
Agents in New Brunswick:—**W. H. Thorne & Co., Ltd., Saint John.**

—Different Sizes and Qualities kept in Stock—

CAPE BRETON COLLIERY.

NEW CAMPBELTON CAPE BRETON N. S.

SUPERIOR

STEAM AND DOMESTIC COAL

SAFE AND CONVENIENT SHIPPING PORT

The Nearest Coal Port to Newfoundland  Just Inside Entrance Great Bras d'Or.

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

- - J. T. Burchell Manager.

INVERNESS IMPERIAL COAL

INVERNESS RAILWAY and COAL COY.
Inverness, Cape Breton.

Miners and Shippers of INVERNESS (BROAD COVE)

Screened, Run-of-Mine Slack.

—First Class both for Domestic and Steam Purposes.—

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

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

INVERNESS RY. & COAL CO'Y

Time Table No. 21, Taking effect at 1 a.m. Oct. 22nd. 1906.

EASTBOUND		STATIONS.	WESTBOUND.	
Read Down	No. 52 No. 54 a. m. P. m.		Read Up	No. 53 P. m.
L 11 10	L 3 55	PT. TUPPER JUNCTION	A 11 00	A 3 35
S 11 16	S 4 00	PORT HAWKESBURY	S 10 56	S 3 27
A 11 20	A 4 10	PORT HASTINGS	L 10 43	L 3 20
L 4 18	L 4 18	TROY	A 10 37	
F 4 26	F 4 26	CHERRISH	P 10 27	
S 4 43	S 4 43	JUDIQUE	P 10 16	
F 4 50	F 4 50	CRANFORD	P 10 04	
L 5 10	L 5 10	CATHERINES FOND	S 9 42	
F 5 23	F 5 23	PORT HOOD	L 9 15	
A 5 26	A 5 26	GLESCOPE	S 8 55	
L 5 42	L 5 42	MADG	A 8 56	
S 5 58	S 5 58	GLENDYRE	S 8 15	
S 6 21	S 6 21	BLACK RIVER	P 8 09	
S 6 23	S 6 23	INVERNESS	L 7 36	
S 6 55	S 6 55			
A 7 26	A 7 26			
P. m.	P. m.			

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

MABOU & GULF COAL COMPANY, L'T'D.

Miners of the

MABOU DIAMOND COAL.

Burns and Works like Bituminous;

Looks and Lasts Like Anthracite;

IT HAS NO EQUAL.

Mines, Piers
and General Offices

MABOU. CAPE BRETON.

ADVERTISE IN THE MINING RECORD.

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

BRIDGES

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

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

Users of Steam

IF YOU WANT TO SAVE FUEL, Use

B. & W. BOILERS,

Over 6,000,000 H. P.
in use.

Patent Steam Superheaters,

2,000,000 H. P. in Use.

Mechanical Stokers, Coal Conveyors, Electric Cranes.

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BLANK BOOKS ruled to pattern and
made in any style of BINDING
Loose leaf supplies of all kinds made to
order.

135 to 167 GRANVILLE STREET.

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BARRISTER, SOLICITOR, ETC.

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Successor to Snelgar and Patterson—

JERSEY - LILY - FLOUR.

*Best all round flour on the market.
Uniform in quality. Every barrel
can be depended upon. This flour can
only be had in Cape Breton, at the stores
of the Dominion Coal Company.*

**Rand Air Compressors,
 "Little Giant" Rock Drills,
 Harrison Coal Cutters,
 Davis Calyx Core DRILLS,
 "Imperial" Pneumatic Tools.**

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CANADIAN RAND COMPANY, LIMITED.

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Sullivan Rock Drills.

Costs less for Maintenance,
 and drill faster than any
 other Drill on the Market.
 May we tell you why?

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I. Matheson & Co. Limited, Agents. New Glasgow, N. S.

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RUBBER HOSE for Air Drills. Pneumatic
 Tools, Steam, Suction, etc.

"REDSTONE SHEET PACKING,"

For highest pressures with Steam, Hot or Cold Water and Air.
 The most durable and satisfactory Packing on the Market.

RUBBER BELTING For Transmitting, Conveying and Elevating.
 Unequalled for Durability and Power Transmitting Qualities.

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STELLARTON, NOVA SCOTIA.

Miners and Shippers of the

CELEBRATED

ACADIA COAL.

Unexcelled for Steam, Domestic and General Purposes.

DELIVERED BY RAIL OR WATER.

SHIPPING PORT: PICTOU LANDING.

Quotations Furnished Promptly on Application.

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Miners and Shippers of

CHIGNECTO HIGH GRADE COAL.

Steam AND Domestic

Unexcelled for General Use.

Shipments to all points reached by the
Intercolonial Railway.

Offices and Colliery - - - Chignecto, N. S.

DAVID MITCHELL, General Manager.

The BROWN MACHINE COY.,

New Glasgow, Nova Scotia.

Coal and Gold Mining Machinery a specialty

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

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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OF CANADA



CONSULTING ENGINEERS

G. C. ROBB CHIEF ENGINEER HEAD OFFICE TORONTO

WHEN WERE YOUR
.. BOILERS ..

...LAST INSPECTED I....

WRITE TO

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WIRE ROPE All Kinds and Sizes
and for all purposes

GREENING Standard and Lang's Patent

Rope Fittings. Rope Grease.
Prices Right. Lay. Prompt Shipments.

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HAMILTON, ONT. MONTREAL, QUE

DRUMMOND COAL.

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

MANUFACTURERS AND MERCHANTS SHOULD ADVERTISE IN THE
MARITIME MINING RECORD Rates Moderate.

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.

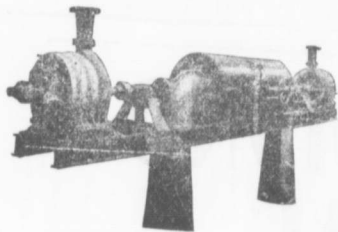
The Reputation of this Coal has Steadily Advanced during the past 40 years and the Output of the new Mine is fully up to the old Standard of Excellence.

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. Montreal Que.

BOILERS: All Sizes and all Pressures.



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.

PUMPS

Worthington Pumps for
Water Works and Mines.

Water Wheels

Doble Water Wheels for high heads.

Mill Machinery

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NEW GLASGOW, N. S., TELEPHONE B'LD.

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,
—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 of 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 or the Company.

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

DOMINION COAL COMPANY, LIMITED,
DOMINION COAL COMPANY, LIMITED,
DOMINION COAL COMPANY, LIMITED,

112 St. James St., Montreal, Que.
171 Lower Water St., Halifax, N. S.
Quebec, Que

—and from the following agents.—

R. P. and W. F. Starr, St. John, N. B.
Harvey & Co., St. Johns, Newfoundland.
Hull Blyth & Co., 4 Fenchurch Avenue, London, E. C.

Peake Bros. & Co. Charlottetown, P.E.I.
A. Johnston, and Co., Stockholm, Sweden.

G. H. DUGGAN,

2nd. Vice President

CUMBERLAND

RAILWAY AND

COAL COMPANY.

OPERATING THREE
THICK SEAMS
NOS 1, 2 AND 3.

—Miners and Shippers of the Well Known—

FRESH MINED SPRINGHILL COAL

... ANALYSIS ...

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

BEST COAL FOR
LOCOMOTIVE USE.

Delivered By Rail. or Water

BEST COAL FOR
GENERAL STEAM PURPOSES.

The year Round

BEST COAL FOR
DOMESTIC CONSUMPTION.

IN Lots To Suit Purchasers.

BEST GAS COAL

Mined in the Province.

Mines

SPRINGHILL

N. S.

Head Office

MONTREAL