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New Series Vol. 10 No. 19

April 8th, 1908

STELLARTON, N. S.

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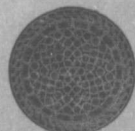
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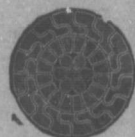
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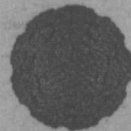
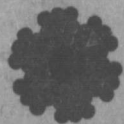
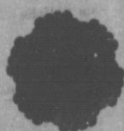
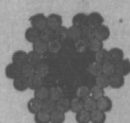
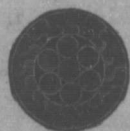
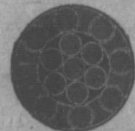
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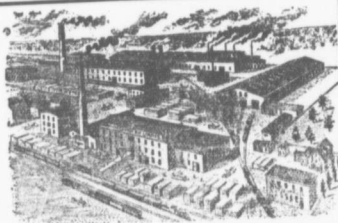
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—TRAINS ARRIVE AT STELLARTON

79 Mixed from Hopewell	6.30
79 Mixed from Trenton	6.55
61 Express from Pictou	7.30
18 Express from New Glasgow	7.35
21 Mixed from Hopewell	7.35
21 Mixed from Truro	10.55
65 Mixed from New Glasgow	10.55
27 Mixed from Pictou	12.55
56 Mixed from Mulgrave	13.00
19 Express from Halifax and St. John	13.10
130 Mixed from Sydney	15.10
30 Express from Sydney	15.10
22 Mixed from Pictou Landing	16.45
77 Mixed from Hopewell	19.45
66 Mixed from Pictou	21.40
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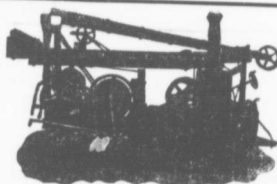
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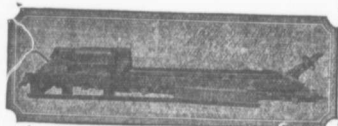
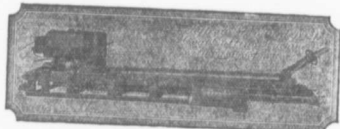
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We invite inquiries, which will have our closest attention.

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New Glasgow, . . . Nova Scotia.

No....

MARITIME MINING RECORD

Vol. 10, No. 19. Stellarton, N. S., April 8th. 1908. New Series

THE NOVA SCOTIA COLLIERY WORKERS' PROVIDENT SOCIETY AND OLD AGE PENSION BOARD.

The following is a copy of the proposed Act transforming the Relief Societies into the Nova Scotia Colliery Workers' Provident Society :

Be it enacted by the Governor, Council, and Assembly, as follows :

1. Every person employed in or about the coal mines of Nova Scotia, and in connection with the works incidental thereto, and every person who may hereafter be so employed shall by reason of such employment be and become a member of "The Nova Scotia Colliery Workers' Provident Society," hereinafter called "The Society," which is hereby constituted a body corporate under said name: Provided, however, that any person becoming a member of this Society after the coming in force of this Act suffering from chronic disease or the recurring effects of injuries received, may be excluded from membership in the Society or any Branch Society formed hereunder.

2. When or so soon as thirty persons are employed in any coal mine, and in connection with the works incidental thereto, a Branch of such Society shall be formed to be known as "The Nova Scotia Colliery Workers' Provident Society" (name of mine).

3. There shall be a Board to be known as "The Nova Scotia Colliery Workers' Provident Society and Old Age Pension Board" hereinafter called "The Board," which shall consist of the following persons:

The Commissioner of Works and Mines, who shall be Chairman; the Provincial Treasurer, who shall be Treasurer; the Deputy Commissioner of Works and Mines, who shall be Secretary. One person to be appointed annually by an official in the employ of the coal mine owners, or if they fail to appoint such person, then such person shall be appointed by the Governor-in-Council from among such mine owners, and two persons to be appointed for a term of three years by the Branch Societies herein before referred to. The Board shall meet at such times as it may appoint in the City of Halifax, and the members shall receive such remuneration for their services as the Governor-in-Council may determine.

4. Such Board shall have power to make all necessary regulations and orders for the organization, administration and government of such Society and the Branches thereof, and for a scheme providing old age and total disability pensions for the members thereof, which regulations having been approved by the Governor-in-Council, shall have the force of law, and particularly, but not so as to limit the general

powers hereinbefore conferred, the Board shall have power to make regulations and orders touching the following subjects:

(a) Providing a constitution for such Branch Societies.

(b) Appointing all necessary officers to inspect the books, affairs and administration of such Branch Societies.

(c) Formulating a scheme providing for old age and total disability pensions for the members of the Society, and determining the sums to be contributed in aid thereof by the members and the coal mine owner.

5. On the coming into force of this Act the Board shall forthwith convene in the City of Halifax a Council consisting of one representative from each Branch of the Society for the purpose of electing the two representatives mentioned in paragraph three hereof; and a similar council shall be convened once in three years in the same place for the same purpose; the outlay for travelling expenses and necessary loss of time of each representative shall be paid by each Branch. In addition to the power of appointing such representatives the Council shall have the right to suggest to the Board a revision of the Branch Constitution and changes in the regulations for the Old Age Pension Fund.

6. The Board shall act as custodian of all funds in excess of the sum of one thousand dollars in the hands of any Branch, and so that at no time shall any Branch have more than the sum of one thousand dollars in its possession, and such sums shall be kept intact to the credit of each Branch, and may by the Board be invested in the securities authorised by law for the investment of trust funds.

7. The owner of every coal mine shall without any order retain the monthly dues payable to the Branch by every member thereof, and shall pay over to the proper officer of such Branch the amounts so retained, or if no Branch is organized he shall remit the same to the Treasurer of the Board. The owner shall also, without any order, retain the monthly contribution payable by each member to the Pension Fund and remit the same to the Treasurer of the Board. No fee or allowance whatever shall be due or payable to any owner or employee of such owner for such retention or paying over of the said dues.

8. The financial and other affairs of each Branch Society shall be managed by a Committee to consist of seven persons, four of whom shall be appointed by the members at their annual meeting, one person to be nominated by the owner and two persons to be nominated by the Board. The Committee shall, from their

number, appoint all necessary officers for the transaction of the business of the Branch, and shall in all matters be subject to the constitution and to the regulations of the Board.

9. The Governor-in-Council may annually pay to the Treasurer of the Board, or if a Branch Society is established, to the Treasurer of such Branch, a sum not in excess of twelve and one-half cents per month for each member, and such sums shall be payable quarterly. The Governor-in-Council may also annually pay to the Treasurer of the Board a sum not in excess of twelve and one-half cents per month for each member in aid of an old age pension and total disability provision for the members of the Society, such sum to be payable quarterly.

10. (1) The owner of every coal mine shall pay to the Treasurer of the Branch Society organized in connection with such mine, the sum of six and one-half cents per month for each member, and such owner shall also on or before the 1st day of October in each year pay to the Treasurer of the Board in aid of the Old Age Pension Fund the sum of seventy-five cents for each member.

(2) Where at any coal mine less than thirty persons are employed, the owners thereof shall be exempted from payment of the contribution to the Society hereinbefore mentioned; provided, however, the Board shall have power to appoint any agent or representative at such mine with such powers as to the Board may seem proper.

11. The Board shall forthwith establish an Emergency Fund for the purpose of enabling special aid to be granted in cases of serious disaster at any coal mine or in such special cases as to the Board may seem reasonable. The Board are hereby authorized to pay and apply to such Emergency Fund the sum of ten per centum of all surplus funds deposited with the Board as aforesaid. The Treasurer of each Branch Society shall annually on or before the first day of October in each year remit to the Treasurer of the Board the sum of thirty cents per capita for each member, which sums shall by the Board be paid and applied to the Emergency Fund. The Governor-in-Council may also annually pay to the Treasurer of the Board in aid of the said Emergency Fund a sum not in excess of two thousand dollars.

12. So soon as said Emergency Fund with accumulated interest amounts to Fifty Thousand Dollars, it shall be available for the support of the widows of members of the Society in accordance with regulations to be framed by the Board; and when and as soon as said Emergency Fund with accumulated interest amounts to One Hundred Thousand Dollars, it shall be available for the support of the children of deceased members in accordance with regulations to be framed by the Board.

13. The relief given by any Society or Fund established under authority of this Chapter, whether to persons injured, or to children or other dependent relations, shall be exempt from attachment and from levy under execution for debt of any kind.

14. Nothing in this Chapter shall affect the liability of any person or corporations for damages resulting from any wrongful act, neglect or default.

15. This Act shall come into force when and as soon as proclaimed by the Governor-in-Council by

publication in the "Royal Gazette," and when and as soon as this Act is proclaimed. Chapter 23 of the Revised Statutes, 1900, is repealed, and all contracts made thereunder shall cease and have no further operation.

16. Notwithstanding the repeal of Chapter 23 of the Revised Statutes, the assets, contracts, liabilities and obligations of each Relief Society organized in accordance with the provisions of said Chapter, shall continue to be the assets, contracts, liabilities and obligations of the Branch organized in substitution therefor.

MINES REGULATION ACT.

PROPOSED AMENDMENTS.

The following are among the most important of the proposed amendments to the Mines Regulation Act. Sections 1 to 3 with sub-sections are omitted, as they deal only with definitions. Some of the amendments, it may be, need amendment.

4. Clause 'b.' of Sub-section four of Section five is repealed and the following substituted therefor:

(b) If for any reasonable cause there is for the time being, no manager of a mine qualified as required by this section, the owner or agent of such mine may appoint any person holding a certificate to be manager for a period not exceeding one month, and notice of such appointment shall be forthwith given to the Commissioner, and shall be subject to his approval. (This amendment is to be commended.—Ed.)

5. Clause (c) of Sub-section 4 of Section five is amended by inserting the word 'or' after the word 'owner,' in the third line thereof, and by striking out the words 'or manager' in the same line.

6. Clause (d) of section six is repealed, and the following substituted therefor:—

The Commissioner shall have the power to cancel or suspend the certificate of the person into whose conduct the enquiry has been made, if he finds that he is guilty of reason of incompetency, drunkenness, or gross negligence, unfit to discharge his duty, or has been convicted of an offence against this Chapter

(This amendment makes the clause conform to common sense.—Ed.)

7. Sub-section four of section ten is amended by striking out the words 'coming into force of this Act,' in line four of said sub-section, and inserting in lieu thereof the words 'third day of March, A.D. 1904.'

8. Section fifteen is amended by inserting after the word 'Commissioner' in the second line thereof, the words 'previous to the coming into force of this Act.'

NOTE.—(19 is amended in draft bill.)

9. Sub-section one of Section 22 is amended by adding thereto the following words: 'If the amount of any mine, where the amount of the persons employed in the wages paid to any of the persons employed in such mine depends on the amount of mineral gotten by them and the getters of such minerals are paid by cubic measurement or by the car or box of a standard weight mutually agreed on by the owner, agent or manager and a majority of the persons so employed, changes such mode of payment to the getters of the mineral and pays such persons so-

ording to the weight of the mineral gotten by them, and such owner, agent or manager endeavors to set up and maintain a new standard of weight for any such car or box, without having first had an agreement made in writing with a majority of the persons so employed sanctioning such new standard of weight for any such car or box, the matter shall be determined as provided in sub-sections 3 and 4 to this section.

(The foregoing evidently bears on the Spring-hill case.—Ed.)

10. Sub-section three of section twenty-two is amended by inserting the words 'or new standard of weight' after the word 'deductions' in the first line thereof.

Sub-section four of Section twenty-two is amended by inserting the words 'or new standard of weight' after the word 'deductions' in the second line thereof.

12 Section twenty-three is amended by striking out the words after 'Chapter' in the fifth line thereof, and substituting therefor the words 'and shall be liable to a penalty of not less than fifty dollars, or more than one hundred dollars, and for every day on which such contravention occurs, it shall constitute a separate and distinct offence.'

(Section twenty-three of the Consolidated Act is Section twenty-one of the Act as in the Statute Book. This amendment is rather sweeping, and is scarcely just. It makes the owner, agent or manager each liable to conviction and penalty no matter whether the subordinate acted in direct violation of instructions of his superior officer. It is possible, however that in any action the court would take a common sense view of the matter and not hold a manager guilty of the Act of a subordinate if he could prove he had taken all necessary means to prevent him committing the offence.—Ed.)

13. Clause 'd' of Sub-section four of Section 29 is amended by inserting the words 'or town' after the word 'municipality' in the first line thereof.

14. Sub-section five of Section 42 is amended by striking out the word 'two' in the fourth line thereof, and substituting therefor the word 'four.'

15. General Rule 2, under Section forty-six is amended by striking out the words 'that part of the mine being or intended to be worked, and the road ways leading thereto' in lines 4 and 5, and substituting in lieu thereof the words 'every part of the mine except places abandoned and properly fenced off according to law.'

(This amendment (13) is no doubt an outcome of the Port Hood explosion.—Ed.)

16. General Rule 3 under section 46 is amended by striking out the words 'that part of the mine, and the roadway leading thereto' in line five thereof, and substituting therefor the words 'with a safety lamp every part of the mine except places abandoned and properly fenced off, according to law.'

17. Section forty-six is amended by inserting after 7 the following General Rule:

7A. Every mine examiner shall, at all times, while in the discharge of his duty as mine examiner, use a locked safety lamp.

18. Sub-section one of Section fifty seven is amended by adding the words 'except as in this Act, otherwise provided.'

19. Clause 'd' of Section fifty-nine is amended by inserting before the word 'By' in the first line thereof, "except in respect to offences against Sections 29, 32, 31 and 32 of this Act.

SUBMARINE COAL MINES.

PAPER PREPARED BY JOHN JOHNSTONE, OF SYDNEY MINES, FOR N. S. MINING SOCIETY.

In preparing a paper upon the above subject, it is impossible to deal exhaustively with the many different phases which may present themselves, but for the present this paper will simply deal with the matter in a general way.

As is undoubtedly known to mining men, our principal heritage along the eastern seaboard of the County of Cape Breton is the valuable coal seams, from some of which the coal has been extracted for more than seventy years. The coal has been almost all taken from the land areas, and the quantity mined has increased in proportion to the demands of trade.

In 1902 the attention of Mr. H. M. Whitney and other capitalists was drawn to the rapidly increasing demands for coal, the possible expansion of the trade, and the necessity of reducing the cost of production, which eventually led to the amalgamation of a number of coal companies (whose operations as individual companies were not always attended with satisfactory results) into what has since been known as the Dominion Coal Company, Limited.

To the companies thus depending entirely upon water communication to reach a market for their product, conditions presented themselves which seemed beyond control, viz, shortness of shipping season and the need of a regular and continuous market, which subjected their business to extreme fluctuations, from producing all that was possible during the season of shipping, to enforced idleness during the winter months.

All this has been changed by the energetic action of far seeing men, and since 1897 new markets have been found at home and abroad, requiring a constant supply of coal. Trade has expanded beyond the most sanguine expectations, and as a result collieries are required to work continuously, and labor has been given, not only to those who hitherto were compelled to remain idle during a large portion of the year, but to a largely increased number.

Up to the present there has been but little done in the way of submarine mining, except by the General Mining Association of London, which has been absorbed by the Nova Scotia Steel and Coal Co., which is at present continuing the workings. Mr. Henry S. Poole, of Halifax, N. S., read a paper before the Institute of Mining Engineers of England at a meeting held at Nottingham, England, on Sept. 3rd and 4th, 1903, and which is to be found in that society's transactions, in which he clearly set forth the conditions under which the coal in these submarine areas was then being extracted. The writer has much pleasure in confirming all that Mr. Poole has said relative thereto.

But a new condition of things is arising; certain well known seams are rapidly being worked

out on the land areas, and the necessity of generally extracting the coal from the submarine areas of our country, greater by far in quantity than that originally contained in the land areas, is becoming acute.

Naturally the question now is, not so much one regarding the extraction of coal from a submarine area extending about a mile from and parallel to the adjoining shore, but how should the operations in leases next to the shore line be undertaken, so as to enable investors to reach out several miles from the shore to extract coal therefrom, that they may have a fair return for the money invested; also, how should we guard with safety all those who may be engaged in the prosecution of the work, and how may we win the greatest possible quantity of coal from those areas, leaving uninjured the outlying properties and successfully meeting the requirements of trade?

These are problems of which, it appears to me, and in the proper solution of which, it appears to the writer, are involved matters that might be the duty of the government to investigate.

Extending for a distance of forty miles along the Eastern seaboard of Cape Breton are coal bearing strata, upon which, until a recent date, no submarine leases were granted, excepting those to the General Mining Association at Sydney Mines, at Barasois and at Lingan, to Charles Campbell at Burnt Head, and to the Blockhouse Company at Cow Bay. Recently a large number of leases extending miles seaward have been applied for and granted—in fact all the distance mentioned has been covered. The descriptions in the leases have not always been accurate or clear, and litigation has arisen as a consequence, and more is likely to follow.

Two questions might here be asked, first: Why were not proper monuments for reference established, so there could not be any doubt about the location of each and every lease or area, whether submarine or land? And, second: Will not a large amount of coal be lost if the present apparently unsystematic distribution of coal leases is not modified?

In England, where this question has had the careful consideration of mining men for years, it has been demonstrated beyond a doubt that not only can coal be mined successfully in submarine areas in the usual way by bord and pillar, but, under certain conditions, all the coal can be extracted therefrom. It has also been demonstrated that the extraction of coal from submarine areas can be successfully done at quite a long distance from the shore line, as instanced at the White Haven collieries of Cumberland county, England, and several other places where coal is being extracted and drawn a distance of four or more miles. There the principal difficulty appears to have resulted from the number of faults, dislocations, anticlinals and synclinals which were encountered. So far as is known, the submarine areas of Cape Breton county are entirely free of any such conditions, and therefore are of very great value from a commercial standpoint.

In the mind of the writer, some of the principal questions to be considered (in addition to any that may have already been mentioned) are as follows:

1st. How should this territory be successfully opened up so as to leave sufficient protection,

and so as to extract coal five or more miles from the shore line in a manner that would give a fair return to the investor?

2nd. What is the best method of providing for ventilation, safety of workmen, haulage, and the extraction of the largest possible quantity of coal from the several seams at this distance?

3rd. Where pillars are required to be left, what size should they be?

4th. Under what conditions should the different sections of a mine be worked?

5th. Can all the coal be taken in the first working?

6th. Under what conditions can all the coal be extracted?

7th. What would be the proper method of procedure to lay out a mine in submarine area, where all the coal is to be extracted?

8th. What is the most efficient method of ventilating workings in a submarine area, where coal is being extracted, two or more miles from the shore or exit?

9th. What is the most efficient system of haulage from submarine areas two or more miles from shore or exit?

10th. What is the best method of taking workmen to and from a given point two or more miles from shore or exit?

MINEERS' WAGES IN BRITAIN.

The following statement shows the wages prevailing in every fifth year since 1857:—

In 1857	the wage was	6s 0d	per day.
" 1862	"	4s 6d	"
" 1867	"	3s 9d	"
" 1872	"	10s 0d	"
" 1877	"	4s 6d	"
" 1882	"	4s 6d	"
" 1887	"	4s 0d	"
" 1892	"	5s 6d	"
" 1897	"	4s 6d	"
" 1902	"	5s 9d	"
" 1907	"	7s 3d	"

These figures cannot be called an average for the five years included. In all cases but two (1897 and 1902) the wage quoted represents the top-water mark reached during the five years. Between 1892 and 1897 the highest point reached was 6s per day, which was maintained for ten months only, while between 1897 and 1902 the Scottish Coal Trade Conciliation Board having come into existence in the interval, wages rose from 6s 3d in 1899 to 8s in 1900. In 1901 reductions came in rapid succession till, in 1902, the wage was down to 5s 6d. The 10s wage quoted for 1872 represents the top-water mark of an exceptionally rich period, which lasted for three years. The summary of the whole position is that, in 1857 the wages of miners was 4s per day, while at present it is 7s 3d, making an increase in half a century of 3s 3d per day. If we go back to 1854 we find the wage 5s per day, showing when compared with what is reckoned a big wage in 1907, that the miner of that period received only 2s 5d less than he is receiving at present time, and only 1s 8d less than he was receiving six or seven months ago. One is reminded, of course, that the miner's working day is very much shorter now than it was.

MARITIME MINING RECORD.

MINE EXPLOSIONS.

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NOVA SCOTIA MINING SOCIETY.

ANNUAL MEETING.

The annual meeting of the N. S. Mining Society was held in the Board of Trade rooms, Halifax, on Wednesday, 25th inst., and, owing to the large amount of business to be transacted, was continued on the succeeding days, 26th and 27th. The attendance of members was large. The President, C. J. Coll, occupied the chair.

Among the prominent visitors present were the following: Dr. Parker, of the U. S. Geological Survey; Dr. Haanel, Director of the Mines Branch, Ottawa; Mr. McLeish, Statistician of the Mines Branch, Ottawa; Dr. W. G. Miller, Ontario; Hugh Fletcher, of the Geological Survey, Ottawa; E. R. Faribault, of the Geological Survey, Ottawa.

The President's address was a masterly one and covered a wide field. It was at once interesting and instructive, and was followed, as it deserved to be, by the closest attention of every one in the room. The President first welcomed the guests. Then congratulated the Society on the largest attendance in its history. Kindly and sympathetic reference was made to the loss the Society had sustained during the year in the removal by the grim reaper of three of its members, viz., Messrs. T. R. Gue and J. J. Stewart and Dr. Gilpin. Briefly he summed up the distinguishing qualities of each, and paid a fine tribute to their characters. Passing on to Technical Education, Mr. Coll extolled the work which an absent member of the Society, Mr. A. McNeil, had done in this connection. The President also complimented the Hon. R. Drummond, Past Pres. Hayward, Dr. Woodman, Hiram Donkin and Prof. Sexton, as having given valuable assistance. The address referred to Technical Education; the financial depression (which affected M. S. least of all); Coal production; Harvest Excursion Rates (which he condemned); Mineral prosperity; gold mining, &c. We regret that we have not space to give the address in full. In the succeeding sessions many interesting and instructive papers were read by Mr. Badger, Prof. Woodman, Prof. Sexton, A. A. Hayward, Percy Brown, Harry Coll, F. P. Ronan and others. The papers of John Johnston on "Submarine Mining," Pres. Coll on "Explosions," A. A. Hayman on "Fuel Economy," and the papers by R. H. Brown and Harry Coll were all most interesting to the 'coal' men present. Reference will be made in this and succeeding issues to some of the papers.

After having made reference to the recent great mining disasters in the U. S., and their probable causes, Pres. Coll, at the meeting of the N. S. Mining Society, spoke as follows:

"Probably no question in connection with coal raining in recent years has attracted more or wider spread attention than this—both before and after the explosions under discussion. More especially is this true in Great Britain and on the continent, where many commissions have been appointed to make careful examinations of powders for coal mines. As a result of such commissions legislation has been enacted whereby only such powders as may be used as have passed the most rigid tests and come under the head of permitted explosives, and named for specific conditions and purposes. It is not within the scope of this paper to touch only briefly on this subject. It is not claimed by the manufacturers of so-called flameless powders, nor is so claimed would it be admitted by practical mining men, that under any and all conditions such powders are "safe." The question that confronts us is that for economic reasons we are obliged to use some explosives to blow down coal. This being the case, what explosive shall be used? Certainly not those which, on every hand (from past experience) have been condemned. I would therefore not consider the use of any other than a so-called flameless powder. Even with this there are dangers well known to the officials and workmen who are in daily contact with its use. It is needless to say that it should never be fired in the presence of gas nor should it be used for fast shooting, especially in a dry, dusty mine. It is a well known fact that a shot well placed and exerting its maximum amount of energy in material won is least dangerous; hence the danger of blown-out shots.

Again, it is well known that even the best of the flameless powders will not explode, but burn in the hole. Taking into consideration the proportion of coal which may only be won economically by shooting, it remains for the Mine Manager of to-day to use the explosive least liable to cause such disasters as have taken place within the past five months, as I am of the opinion that nearly all of them were directly due to the use of so-called non-flameless explosives in the presence of other elements of danger. The essentials of shooting to reduce as far as possible every chance for disastrous results are comprised within certain precautions:—

First.—The working face to be shot should be properly mined and sheared (if a close cut) to permit of the greatest effective energy of the charge being consumed in the breaking down of the coal.

Second.—Holes should be so drilled as to bring maximum results from a minimum charge. This is a matter of education, as it will usually be found that there are miners or officials who make a close study of this question. Returns will show day in and day out that certain men will put out more coal per given quantity of powder than others. Their method of holing and charging should be the basis for like conditions.

Third.—No fast shooting should be allowed under any circumstance or condition. I feel sure

this position is subject to attack both by operators and workmen. A detailed defence of this declaration would of necessity be a paper in itself. I will therefore confine myself to a simple assertion that there are more dangers connected with fast shooting due to the possibility of blown-out shots than with all other troubles combined incident to the use of explosives. This has been recognized by some districts, and is a matter of legal regulation.

I offer for your consideration the rules governing shooting which have recently been put into practice in the mines of the Acadia Coal Company:

1. When a miner holding a Shotfirer's certificate is given permission to fire his own shots, before firing he must carefully examine the place where the shot is to be fired, and if he discovers any noxious gases, defects in the roof, or danger from any other source, no shots must be fired until such danger is removed.

2. No shot must be fired until the face is either sheared, mined or undercut, not less than three feet deep, the full size of the place, or having an open end equal to the same, without special permission.

3. No shot must be fired, when the borehole used for firing extends beyond such mining, shearing, under-cutting or open end. All holes found beyond such mining, shearing or open end will be termed fast shots.

4. No shots must be fired with the timbering at a greater distance from the working face than eight feet, or closer if required by the management, or by a special permit, that timbering may be a greater distance from the working face.

5. He must return immediately to each shot after it fires, and if he should find that the shot has lighted a blower of gas, liberated a quantity of gas, or disturbed the roof or timber, and caused danger beyond his control, to either extinguish, repair or make safe, he shall immediately notify some official at the time in charge of the mine or district in which he is working.

6. When a "Bench" shot has been fired, the miner must immediately proceed to turn over the coal or load it out.

7. If the shot fails to go off, no person shall be permitted to enter to the working face until such time as he receives permission from and is accompanied by the Examiner of that section.

8. No holes shall be charged for a longer period than 30 minutes before being fired.

9. If, owing to an insufficient charge of powder, a face shall be "hung up," all the coal to the depth of that shot must be mined out by hand pick or machine, unless permission is given by the examiner of that section to drill and fire another shot.

10. No miner or shot-firer shall have any charged hole in his working face, when quitting work for the day.

11. No person shall drill any hole in such manner that when fired it will be liable to shoot into either roof or bottom of the coal seam.

12. If a miner, at any time before or after firing a shot, finds that any timber requires to be set or replaced, he must not leave the place until such requirements are duly executed.

13. He shall also set sufficient holding props

when required to do so, and to work his place in a safe and proper manner.

14. In firing shots with a battery, the wires shall be first connected to the fuse wire, and the connection to the battery shall be made only by the person who has made the connection with the fuse wire.

15. Every precaution must be taken to ensure each person being in a safe place before any shot shall be connected with a battery.

16. No battery shall be tested or tried at any point outside of the lamp station.

17. No batteries shall be permitted to be used by any other than one holding shot-firer's papers.

18. No person shall be permitted to fire shots without permission from the examiner or official in charge of the mine.

By special order another rule has since been put into effect, namely, that all holes must be stemmed with clay. It will be noted no mention is made of stemming bars or needles, as the Mines Regulation Act of Nova Scotia provides that no other than copper-tipped or wood be used.

No person other than a regularly appointed official shot-firer should be permitted to fire a shot. It would be his duty to examine every place before shooting, and also to see that holes are properly placed and drilled, and to make a study of the amount of charge required under any condition which may arise. It should also be his duty to instruct unskilled labor in their duties, and warn them of dangerous conditions.

There are two bugaboos facing operators in changes (so far as operators are concerned in their relation to labor) namely, from open to closed lights and in explosives. The antagonism to such changes on the part of workmen is largely one of sentiment. I do not hesitate to say that where better and safer means are adopted for the preservation of life and protection of property, and when workmen become familiar with such means, they would object as strenuously if the old customs and practices were restored.

COAL DUST.—This menace to all coal mining has probably been the cause of more heated discussion for and against its explosiveness than any condition connected with mining. From the days of Faraday and Lyell until the present time this question has been a matter of dispute. That it will augment the force of an explosion of fire-damp is, however, recognized by practically all mining men. It is also generally admitted that a so-called negligible per centage of gas and coal dust may, under certain conditions and mixtures, become explosive as a mixture. The careful mining man should not be led into splitting hairs in any matter wherein there is the barest possibility of danger. Such questions had best been left for a discussion to persons whose interests are not of a financial nature in mines or mining. Fewer accidents will happen if the gun is always treated as being loaded.

The theories advanced that in itself (coal dust) more danger is to be apprehended in Winter than in Summer, in intake airways than in returns, in high air velocities than in low, should receive no consideration from Mine Managers

whose duty it is to keep a mine up to its highest effective point, which precludes the possibility of accident, where accepted measures of practice, if employed, would avert them. The only known effective and practical solution of overcoming the difficulty of dust is humidity.

The simplest and no doubt the best plan is by sprinkling. Obviously the more nearly this approaches saturation the better. At this juncture I wish to lay particular stress on thoroughly wetting floor, sides and roof. Especially is this necessary in main haulage ways used as an intake, for the reason that explosive forces invariably travel against the current of fresh air, and it is also true that such explosive forces have spent or been greatly reduced when such an airway or district has been reached when coming from in-bye, the usual source of an explosion. It has been suggested that a small proportion of lime added to water will reduce combustibility of dust materially. Humidity may also be greatly increased by means of sprays in the intakes. This is readily accomplished in deep mines where a head of water may be obtained from discharge columns. From these small lines may be run to intakes. By small perforations in coils, air may be thoroughly saturated. While much of the moisture would no doubt be precipitated within a short distance, enough would remain in suspension to overcome the difference in humidity as between Summer and Winter. In other words, it would be uniform the year round.

FIRE DAMP.—Little need be said about this, for, like the poor and taxes, we have it with us always. Well regulated and distributed ventilation is the only remedy. Constant vigilance, frequent inspection and rigid discipline are absolutely necessary in order to prevent accidents. In my opinion, the barometer should be carefully considered as a means of warning. Treated as such, it will induce extra precautions and watchfulness during periods of atmospheric disturbance. It may be of interest to the members to know that it was remarked by the officials of the Acadia Coal Company that during the latter part of the year 1907 there were frequent and violent fluctuations of the barometer recorded. It was during this time the explosions under discussion occurred.

In conclusion, I would recommend as follows:

First—Frame simple, effective, stringent laws to cover local conditions.

Second—Operators obey the laws. When it is known that no evasions on their part are countenanced or contemplated, workmen will be more amenable to discipline.

Third—Court the closest inspection under the laws and take suggestions even beyond the laws which make for the betterment of conditions.

Fourth—Exercise strict discipline with workmen, and educate ignorant and unskilled labour to meet dangerous conditions.

Fifth—Use none other than approved safety lamps where fire damp or dust are likely to occur.

Sixth—Abolish electric mining machines in dry gaseous mines.

Seventh—Prohibit the use of all explosives except non-flameless ones.

Eighth—Permit no fast shooting.

Ninth—Prohibit the use of coal dust for tamping.

Tenth—Supervision as to placing of holes and amount of charge.

Eleventh—Employ regularly appointed shot-firers to fire all shots.

Twelfth—Allay coal dust as much as possible by sprinkling or other means.

Thirteenth—Remove all coal dust after machines before firing shots.

Fourteenth—Have adequate ventilation and regulated to meet conditions.

Fifteenth—Employ competent, conscientious officials, and see that all parts of the mine are visited at frequent intervals.

If such regulations had been carried out in the spirit as well as to the letter, the appalling calamities which have been the subject of this paper would not have occurred.

- Rubs by Rambler.

A paper by F. P. Ronan entitled "A practical suggestion for testing the Gold Mines of Nova Scotia," read before the Mining Society of Nova Scotia, at its recent meeting, begins thus:—"Various plans have been suggested for the encouragement of gold mining in Nova Scotia." None dare dispute the statement. There's the Mining Society itself who suggested that the one thing needful was that the Government go halloo in sinking a thousand feet or so shaft. The Government came 'to time, and yet not one of the members who vehemently urged this plan displayed any alacrity in taking it up. Each one is waiting for the other fellow to put his hands in his pocket and lay down dollar for dollar with the Government. Then a well known gold miner assured us, seriously and solemnly, that the lack of progress in gold mining was the fault of the coal men. The price of fuel was altogether too high. It was ruining the industry. The coal men were relentless, and made no move towards lowering prices. Moreover, the gold mine using the most coal, while having the poorest pay ore, kept on this plan tenor of its way paying dividends, therefore numerous to mention as they say in the auction bills, but not one of them approaches in ingenuity, in boldness of conception, in assurance of its great possibilities and easy practicabilities, in its novel simplicity and at the same time dumbfounding depth of originality than the plan propounded in Ronan his paper.

The author admits that the Government's former proposals were exceptionally favorable, but the paper suggests that, though generous the proposals were not quite practicable. The author takes it for granted that we have in N. S. a wide extent and distribution of gold bearing deposits. I admit that a fellow named Ricardo, do after a hop, step and jump over the Province, assured us that in our beliefs as to gold in abundance we were and are in a fool's paradise. But as between Ricardo and Ronan we are all with Ronan. The author, so far trouble agreeing with Ricardo, says: ". . . the chief living in Nova Scotia is that there are so many openings and opportunities for the investment of capital in gold mining." Will any one dispute these statements. There are openings in every county that shows

rocks; the formation or color or size of them does not count, or rather was not counted when the openings were made. And as for the opportunities, my sakes I they confront you on every side. I am not a gold miner, and yet at least five opportunities have been placed before me for investing money in gold openings; and on five occasions I have embraced them. You ask me "How much richer are you?" Get away man; if I am not richer in gold I am a good deal richer in experience. Yes, a very great deal. Our author tells us "There are without doubt in the Province to-day a thousand gold mines." Well, that is comforting in a sense, or consoling. It shows that opportunities presented themselves to a large number of Nova Scotians and thousands of them regarded them, and are richer also—in a certain direction. After deploring the ill success and bad management of the gold mines, in the past, the author proceeds to propound his plan, and surely it is to the discredit of professional gold miners that it is left to a layman to make so far reaching a discovery.

"If I had the honor and responsibility of filling the chair or department of mines in Nova Scotia. I would start the ball rolling by inviting the attention of all practical mining men to the fact that the Government is prepared to undertake gold mining development with the sole object in view of creating a very much wider measure of interest in the same than at present exists. I would next issue an invitation to all owners of gold mines throughout Nova Scotia to forward to my department, within a certain date, as complete a description of their property as they could furnish, accompanied by maps, plans, mill returns, &c., and also an offer in a formal way, of the property to the Government at as low a price as they consider they could accept. I would ask them each to specify that the Government would have the right to a three year's working option, if required, without charge.

"I have not the slightest doubt that the response to such an invitation would be a most generous one. I would employ two or three practical mining engineers who have had the necessary training in picking out and prospects which promise the making of good mines, and whose judgment in nine out of ten cases is usually found correct, as verified in many western camps. I would then take the most promising property selected by these experts, one from each district, and on a certain day to be determined, in the presence of these interested, I would draw by lot the property to be exploited. In this manner I would avert, as far as possible, any charge of partiality toward any district or any one property, and I believe it would be the only way to determine which one of, say a dozen properties, each equally promising, should enjoy the first attention. With the property selected, then I would map out, or have my engineers plan a scheme of development for the purpose of placing in sight bodies of ore, and in short the making of a mine. I would then ask for an appropriation of sufficient money to carry on this work, and see that it was prosecuted vigorously and scientifically to its logical conclusion.

"We will assume, for instance, that after selecting the property in this manner, that it has been decided in consultation to spend up to the sum of \$50,000 in making a mine of this prospect, and assuming further that as the result of six months' careful underground work the results are unsatisfactory from an engineer's standpoint in the way of producing a measurable pay ore body, then I would hand the property back to the original owner and relinquish the option of purchase,

letting him have the benefit of the expenditure so far incurred, and which had not resulted as expected, leaving him to carry on any further work.

"I would then repeat the operation as already described, on another property, and we will assume, for illustration, that the second property, as the result of the expenditure of, say \$50,000, within six months is so far satisfactory as to warrant a still further amount, and we will assume that conditions keep improving, and that after two years working we have made a mine which may be submitted to the most exacting tests required by competent mining engineers, then I would, as minister of mines, inform the owner that the Government would exercise its option of purchase on the price first agreed on, and the property would then belong to the people of Nova Scotia, together with all its improvements. If it were thought necessary to carry on the development still further, very good. But if already in a position to be called a mine, then I would cause to be prepared a full, frank and complete statement of the property, describe it in detail, illustrate its ore occurrences, the tonnage of ore that had been developed, and such other facts as may safely be predicted by an undertaking of this kind. I would advertise the property in the leading mining and financial journals of England, Europe, United States and Canada, stating that on a certain date in the future this property, as described, would be offered for sale by public auction to the highest bidder, thus provoking competition from the keenest mining investors all over the world, and backed by the unquestionable evidence of actual ore bodies blocked out, and with their qualities, there would be little difficulty, in my opinion, in effecting a sale at a price far beyond the original cost of the property and the improvements. The sum derived from such a sale would then be turned into a fund for repeating the operation indefinitely in the various districts as fast as they could be reached, thus permitting an absolutely necessary work being carried on without cost to the government, and focusing attention upon one of the most valuable possessions which this Province enjoys, viz., its undeveloped gold resources. The operation would then become continuous, and with the steadily added string of mining properties which had been proved beyond question, would come a very great revival of interest and enthusiasm in our provinces, and it might even be unnecessary for the Government to continue the programme unless its merits had entitled it to a foremost place as a practical method of progress."

The author's proposal, however alluring it may be, will not be accepted by the present economical Government. Probably there may be reasons why the Government should not make a bound at the proposal. It may see no necessity to bond gold areas so long as any number can be obtained free. I am in favor of Ronan's proposal, only I want it made much wider in its application. You see, it's this way. I have an iron ore property at Whyccomagh, or perhaps I should say I have a property on which there is or is supposed to be ore. I am willing that the Government should expend fifty thousand dollars on it. I will give them an option on it for half the sum. After spending fifty thousand dollars, if they find ore I shall be prepared to receive the stipulated cash. The gain will be mine, and gain and glory theirs. If ore is not found, they are out fifty thousand dollars, and I am out in sympathy with them. That's all.

The Sec-Treas. and Managing Director of the Free Coal League—of course I refer to Mr. W. C. Milner—

is not at all pleased that attention should be pointedly called to the fact that he has been thoroughly converted to the Dominion Coal Co. If attention was called to the fact, is it wonderful? Is not the conversion a notable and astonishing one? If the Sec. of the Coal Trade League has been so thoroughly converted, there is almost justification for the belief of Burns, that the devil himself may yet take a thought and "mend." Than the Sec. of the League, the Dominion Coal Co. has had no more bitter and vicious opponent—up till three or less months ago. The Secretary does not deny the thoroughness of the conversion, but he is at pains to assert that the Mining Record was not a contributor to that act of grace. This may be but natural. It is pretty hard for a fellow to confess that he has been convinced by the reasoning of an opponent. The Sec. of the League is not pleased at the alleged conversion of Mr. Drummond. This gentleman was once an advocate of reciprocity, and is now luke warm on the subject. Mr. Milner puts Mr. Drummond's attitude thus:—Firstly, a reciprocationist; secondly, in the valleys of doubts, and, thirdly, a damner of reciprocity with faint praise. Well, isn't that the natural order of progression. The time that Mr. D. was in the valley was the time that friend Milner was in the wholesale pro-amazé; some believed in the Secy. for a time and then fell away. Mr. D. may have been in doubt and called for more light, and as that light did not shine forth one who has now converted him. But more to the point. Friend M. is surprised that Mr. Drummond unbeliever after 1900. If friend Milner—the Secretary —was the least bit of a philosopher he might not be Province, if not in a lamentable condition, was making no satisfactory progress. Wages were low, the price of coal was low, and there was no money in the business. Does not the axiom 'any port is a storm' contain a good deal of philosophy, and if, taking the condition of the trade into account, Mr. Drummond ran for reciprocity, after the manner of the stern-tossed mariner, running for any port, is he to be severely criticised. Conditions having vastly improved, the storm having passed, why should Mr. Drummond, or any one interested in the trade, run for the 'any port, or the doubtful port of reciprocity, the while there are prosperous breezes towards the home port. Having little, prior to 1890, the coal trade was willing to risk it in an effort to secure something possibly better; having, what may be termed, a sufficiency now, the coal trade is not willing to risk it, even for the opulence which the Secretary declares must follow on reciprocity. The Secretary asks if Mr. Drummond got his illumination from Glace Bay. The frank answer to that is, possibly. Previous to 1900 the Dominion Coal Co., the Company doing a bigger business than all the other companies combined, was under the opinion that a very large and profitable business could be done in the United States, and thought, moreover, that as the Canadian market was then limited, that such a market was necessary. Then there came about a change in conditions. The home market showed signs of wonderful vitality, so great a growth that the United States market, for round coal, was no longer a necessity, and the company having adapted itself to the changing conditions, preferred the bird in the hand to the possible two in the bush. Is it marvellous that with changed conditions in Canada many should have

changed their views about reciprocity? The wonder is, that in spite of all the light that is shining around him, the Secretary continues intermittent blasts on his old fog horn. While the Record still claims principal credit for the Secretary's conversion, it is willing to admit that it may have been accelerated by one from the East, who occasionally meets the 'Secretary' in Halifax. From the point of view of the cheap coal to railway men, that one's influence may be looked upon as malign, while from the Coal Companies' point of view it may be hailed as benign.

The British Licensing Bill has aroused "The Trade" to a point of desperation, and it is proposed to stay the passage of the Bill by an expenditure of millions of money. Many are the arguments put forward in opposition to the Bill, cutting in a way their propounders did not expect. For instance, one who is prominent in "The Trade" in Glasgow, told an interviewer that he was afraid of shady tactics being resorted to by the more unscrupulous of the publicans. They will make the most of the time at their disposal, he said, before the threatened depression, and much deleterious rubbish will run down the throats of the customers. "I do not seek to 'disfranchise' the public," he continued. "Many in our line ever foisting on the public the vilest decoctions who care not whether they poison their customers, are the men the British people are asked to have consideration for. In saying they would do so foul a thing this leader of 'The Trade' gives publicans in general a character deserving of nothing but execration. That they have been given fourteen years to put their house in order is but proof of the Britishers' love for what he considers fair play. If he errs in this bill it is on the side of indulgence.

An Old Age Pension Act, giving pensions to colliery workers who have reached 65 years was introduced by the premier last Friday. The bill it is understood provides for a pension of \$120.00 per annum. The Pension Commission recommended \$4 per week in cases of old age, and \$5 per week in cases of permanent disablement. The probability is the miners would prefer to pay larger dues in order to secure larger pensions. However, the Bill indicates a forward movement.

An addition is about to be made to No. 2 bankhead, Springhill, to allow the handling of 20 cars on a slope rake. Twelve is the number hoisted at present. While this work of extension is being done the slope, for some distance below the surface, will be reduced in grade several degrees. This will greatly facilitate the landing of the heavy rakes contemplated.

It would almost lead one to suppose that after all there might be something good in this Labor Disputes Act. But there is a weakness in the act, or there should be another clause appended, viz: "No member of the Legislature, or any man actively interested in a particular political party, should be allowed on, or about, or within, miles of a Board of Conciliation.

AROUND THE COLLIERIES.

The Dominion Coal Co. are realizing some encouraging outputs these days. All the mines are in splendid shape for a big summer's work.

The Dom. Coal Co. will have sixteen steamers engaged in carrying coal this year. A large number of the vessels are of large tonnage. Cargoes of 6000 to 7000 tons will be common.

The output of the Inverness mine is about 900 tons per day at present. Pillars are being drawn in No. 5 and No. 6 levels west. The mine is in fair condition for summer work.

The same staff of officials and the same organization exists this year at Dom. No. 3 as last; and on this account the Record has every belief that there will be things doing this summer.

The Emery—Dom. No. 10—is now producing over 500 tons per day. Mr. McEachren is putting this mine in excellent shape, and to this end he is being well supported by a practical staff.

Dom. No. 3 haulage is being extended from No. 14 to No. 15 levels. Development work in this colliery is well advanced, the deeps being down to No. 16 lift, affording working room for the next two years.

The best of feelings prevails between men and management at all the collieries of the Dom. Coal Co. The mechanics grumbled a little over the award, but they are now content to let things move along quietly meantime.

There are those who persist in saying that the Dom. Iron & Steel Co. is after 'Scotia.' All that may be said on that point is that not one of the directors, from the President down, ever saw or heard of any such proposal.

In the event of any prolonged strike of the U. S. soft coal miners, the Nova Scotia operators will be in a similar position to that in which they were found on former like occasions, viz., they will be in no position to meet any demand from across the border.

It is understood that all the colliery operators—the Dominion Coal Co. excluded—last week notified the lodges of the P. W. A. that they could not accede to the request for an advance in the wages of the unskilled mine and surface laborers, or to mechanics.

The No. 4 colliery of the Nova Scotia Steel & Coal Co. will be a dandy—for want of a stronger term—as there are several new things on board, including electric coal cutting machines and a rather novel method of hauling headways coal, that is, taking the coal down the headway from the room.

The shipping season is expected to begin shortly. The collieries are in good condition for big shipments, though the banks of coal are much smaller this year than formerly. The N. S. S. & C. Co. have about half the quantity on bank they had last year. The coal formerly banked has, owing to the mildness of the season, been shipped.

The March output of the collieries of the Dominion Coal Co. was the largest for that month on record.

The Nova Scotia Steel and Coal Co. will send in the vicinity of 270,000 tons to the St. Lawrence this year.

Springhill is still enjoying peace and plenty. But, how long will it last, is always a pertinent question in the community.

Mr. Plummer, of the Dominion Iron and Steel Co. is as confident as ever as to the outcome of the suit before the Privy Council. Those who are not in the inside must just wait and see.

A coal conveyor is being erected at No. 2 mine Springhill, to connect with the culm heap at No. 3 mine, which will supply No. 2 fire doors with coal and will do away with the necessity of carting, as is now being done.

The employees of the Dominion Coal Company and Cape Breton generally are to be congratulated on the outcome of the work of the Conciliation Board, and the manly acceptance of the award by the men. They were fortunate in their choice of men as arbitrators.

Grand Secretary Moffatt of the F. W. A. visited Springhill recently. Whether his presence in the town speaks for peace or for war, time will tell. Having sold our birthright for a mess of Yankee potatoes anything might be expected.

It is whispered in Halifax that W. C. Milner has a rod in pickle for Alexander Dick. The Free Coal League at the present time consists of the Secretary and a corpse. The evening of the day which sees Mr. M. draw the rod out of the pickle, will witness the reduction of the membership of the League to two corpses.

The Morning Chronicle of 2nd inst. had scare lines over an account of supposed friction between the N. S. Steel & Coal Co. and the Dominion Iron & Steel Co. concerning the ore seams at Wabana. At no time was this supposed friction hot, not even warm. Before the Chronicle's headlines appeared, the slight difference had been practically settled.

The Press Committee of Pioneer Lodge formerly of the P. W. A. is busy these days and have four papers at least, devoted to their side of the question, viz.: The S. H. Tribune; Moncton Free Speech; Halifax Herald and the Kansas Appeal to Reason. The papers for various reasons have taken up the labor questions, as it pertains to Springhill and are making things hum. The management, who are the objects of these attacks, appear to take little notice of the matter. The management appear to have attained the philosophic mind of the big miner, who, on being expostulated with for allowing his wife (a little woman) to knock him about replied: 'Oh, well, it don't hurt me and it pleases ah.'

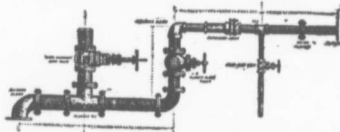
The annual programme of the P. W. A. was laid before the Government ten days ago, by as able a lot of delegates as ever appeared in the 'Executive Council' room. The requests of the P. W. A. men were "Commission to enquire into high cost of living." This will not likely be pressed, as the tendency of prices is downwards. "Fifty dollars on the death by accident of colliery workers where there are no Relief Societies, as well as where these exist." The Government may accede to this demand, or make Relief Societies compulsory at even third-rate collieries. "Miners' Boards," to be composed of miners and not officials." The discussion on this point was interesting; the M. P. Pa. will likely after this be a little more careful in the selection of the appointees. "Drawing of pillars by electricity." Power was given the Deputy Inspector to forbid their use where and when he thought the use of them might be attended with danger. "Riding rakes when needed." This refers to conveyance from the bottom to the working places. The operators agreed to make every reasonable effort to accommodate the workmen. "Eight hour day." The Government took this question to avizandum, as the Scottish sheriffs say. "Weekly pay." This question was deferred. "Boiler Inspection." The Government urged that boilers were now being inspected by the Insurance Co., and that this inspection was likely more effective than any they could promote. The delegates reported that the inspection was inadequate and perfunctory; that in some cases the inspection consisted in nothing more than a few questions being put to the fireman. Action deferred. The delegation spent some time with the Commissioner and D. C. of Mines, and the law clerk, in discussing the proposed amendments to the consolidated Regulation of Mines Act. The delegation endorsed the idea that the mine examiner, in making his rounds, shall always be accompanied by some other employee. The Government and the delegation parted good friends—as usual.

Closed lights were put in the new No. 4 colliery of the N. S. S. & C. Co. at Sydney Mines on the 15th. No gas has ever been found in the mine, but it was thought this was the best time to put in the closed lights, before a large number of men were employed, who might make a fuss.

Much praise is due Manager Beaton for the prompt steps he took to extinguish the incipient fire in the mine a fortnight ago. The damage done according to the report of the Deputy Inspector, was trifling. The Inverness Railway & Co. may have commenced shipments to Quebec by the time this appears in print. There is no ice to speak of between Quebec and C. B.

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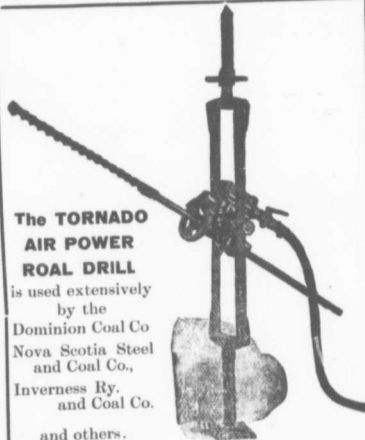
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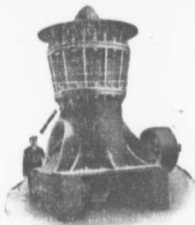


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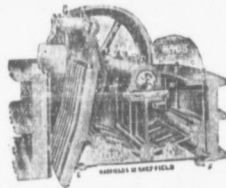
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Synopsis of Canadian North-West.

Homestead Regulations.

ANY even numbered section of Dominion Lands in Manitoba or the North-west Provinces, excepting 2 and 36, 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 entry must be made in person by the applicant at a Dominion Lands Agency or Sub-agency for the district in which the land is situated. Entry by proxy may, however, be made at an Agency on certain conditions by the father, mother, son, daughter, brother or sister of an intending homesteader.

An application for entry or cancellation made personally at any Sub-agent's office may be wired to the Agent by the Sub-agent, at the expense of such application into have priority and the land will be held until the necessary papers to complete the transaction are received by mail.

In case of "pre-emption" or fraud the applicant will forfeit all priority of claims or if entry has been granted it will be summarily cancelled.

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

When an entry is cancelled subsequent to institution of cancellation proceedings, the applicant for cancellation will be entitled to prior right of entry in default.

Applicant for cancellation must state in what particulars the homestead is in default.

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

The homesteader is required to perform the homestead duties 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) A homesteader may, if he so desires, perform the required residence duties by living on farming land owned solely by him, not less than eighty (80) acres in extent, in the vicinity of his homestead. Joint ownership in land will not meet this requirement.

(3) If the father (or mother, if the father is deceased) of a homesteader has permanent residence on farming land owned solely by him, not less than eighty (80) acres in extent, in the vicinity of the homestead or upon a homesteader's resident duties by living with the father (or mother).

(4) The term "vicinity" in the two preceding paragraphs is defined as meaning not more than nine miles in a direct line, exclusive of the width of road allowances crossed in the measurement.

(5) A homesteader intending to perform his resident duties in accordance with the above while living with parents or on farming land owned by himself must notify the Agent for the district of such intention.

Six months' notice in writing must be given to the Commissioner of Dominion Lands at Ottawa, of intention to apply for Patent.

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.

W. W. CORY,

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 250 acres can be acquired by one individual or company. Royalty at the rate of ten cents per ton of 2,240 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 individual, 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 1500 x 1500 feet.

The fee for recording a claim is \$5. At least \$100 must be expended on the claim each year or paid to the minister recorder in lieu thereof. When \$200 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 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 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.

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Deputy of the Minister of the Interior.

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Read Down				Read Up		
No. 52	No. 54		No. 51	No. 48		
a. m.	p. m.			a. m.	p. m.	
L 11 00	L 3 20	P	TUPPER JUNCTION	A 12 30	A 3 35	
S 11 06	S 3 26	P	FORT HAWKESBURY	S 12 35	S 3 37	
A 11 15	A 3 35	P	PORT HASTINGS	L 10 25	L 3 10	
L 4 15	L 4 15	P	TROY	A 10 17	A 3 02	
P 4 23	P 4 23	P	CREIGNISH	S 9 57	S 2 54	
S 4 28	S 4 28	P	JUDIQUE	P 9 37	P 2 37	
P 4 36	P 4 36	P	CRAGMONN	L 9 17	L 2 20	
S 4 40	S 4 40	P	CATHERINES POINT	P 9 03	P 2 08	
A 4 45	A 4 45	P	PORT HOOD	L 8 47	L 1 50	
L 4 50	L 4 50	P	GLENSIDE	S 8 25	S 1 30	
S 4 55	S 4 55	P	SARGO	S 7 55	S 1 00	
P 4 58	P 4 58	P	GLENDERE	S 7 35	S 0 45	
S 5 00	S 5 00	P	FLYING RIVER	S 7 15	S 0 30	
A 5 05	A 5 05	P	ST. THOMAS	S 7 00	S 0 15	
L 5 10	L 5 10	P	INVERNESS	L 6 45	L 0 00	

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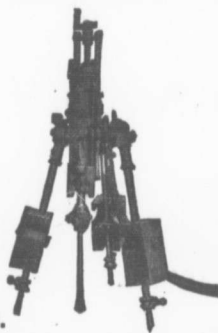
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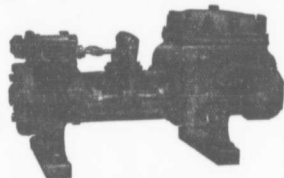
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EMERSON STEAM PUMPS, (Pulsometer Type)

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FRESH MINED SPRINGHILL COAL

... ANALYSIS ...

	NO 1	NO 2	NO 3
Moisture.....	2.02%	1.41%	2.71%
Volatile combustible matter.....	18.94%	27.93%	23.41%
Fixed Carbon.....	75.29%	67.47%	64.69%
Ash.....	3.75%	3.19%	4.19%
	100.00	100.00	100.00
Sulphur.....	1.15%	58%	.79%

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The year Round

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—Yearly output 3,500,000 tons.—

ANALYSES.

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

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

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

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

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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.

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