MARITIME
MINING RECORD
COAL AND METAL TRADE JOURNAL

Cumberland. ✳ *Pictou.* ✳ *Cape Breton.* ✳ *Inverness*

New Series Vol. 10 No. 17 March 11th, 1908 STELLARTON, N. S

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No	79 Mixed for Trenton	6.30
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	21 Mixed for Pictou Landing	7.40
	62 Mixed for Pictou	7.45
	55 Mixed for Mulgrave	8.30
	19 Express for Sydn y	11.10
	28 Mixed for Pictou	11.15
	56 Mixed for Truro	13.55
	139 Mixed for New Glasgow	15.55
	85 Express for the Sydneys	16.50
	20 Express for Halifax and Montreal	15.30
	140 MiXed for Pictou	15.35
	181 Mixed for Pictou Landing	16.45
	22 Mixed for Ho ewell	18.10
	65 Mixed for New G lasgow	19.50
	86 Express for Halifax and St. John	19.50
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—TRAINS ARRIVE AT STELLARTON

79 Mixed from Hopewell	6.30
78 Mixed from Trenton	6.55
61 Express from Pictou	7.30
18 Express from New Glasgow	7.35
21 Mixed from Hopewell	7.36
55 Mixed from Truro	8.00
28 Mixed from New Glasgow	10.55
27 Mixed from Pictou	13.35
56 Mixed from Mulgrave	11.00
19 Express from Halifax and St John	15.15
139 Mixed from Pictou	16.40
85 Express from Halifax and St. John	16.30
20 Express from Sydney	18.10
22 Mixed from Pictou Landing	18.45
77 Mixed from Hopewell	19.35
65 Mixed from Pictou	19.40
86 Express from the Sydneys	21.40
66 Express from New Glasgow	21.45
17 Express from St John and Halifax	

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CHRISTOPHER CHISHOLM

Commissioner of Public Works and Mines, HALIFAX, N S.

The....
MARITIME MINING RECORD

Vol. 10, No. 16. Stellarton, N. S., Feb. 26th. 1908. New Series

COMPILED QUESTIONS AND ANSWERS.

We purpose giving a series of articles in the form of questions and answers, which, though of an elementary character, may be of service to those engaged in mining, and who desire to have some theoretical knowledge of their work. We will make free use of whatever authorities we think the best for our purpose. We will begin with "Geology," which is of considerable value, especially in Nova Scotia, where the ground is frequently broken.

Question. Has the earth a 'crust?' The 'crust' of the earth being a term frequently heard.

Answer. Until a comparatively recent period it was thought by many that the earth consisted of an outer hard crust, perhaps a dozen miles in thickness, and that the interior consisted of molten matter or metal at a very high temperature. People may have been led to this belief from the fact that the deeper the earth is penetrated the higher becomes the temperature, and some argue that if the interior was not in a molten state, how are volcanoes to be accounted for, which spew out great masses of boiling slag. Notwithstanding the heat, and the eruptions, the best opinion is that the earth is solid throughout.

Ques. What is the earth composed of?

Ans. Rock, which once was mud. Rock consists of mineral matter in various combination. The chemist divides the substances found in the earth into bodies called elements, too numerous to mention, and all the names of the varying minerals have not yet been properly classified. Some known minerals have not yet been appropriately named. Of the various and numerous elements sixteen only play any important part. The most important and most frequently met with of the elements are oxygen, silicon, magnesium, calcium, sodium, potassum, iron and carbon. Oxygen forms about 50% of all the known rocks. The elements named above with aluminun forms 97% of the total of the elements.

Ques. Define Mineral and Rock.

Ans. Minerals are definite chemical compounds, the elements of which they are composed being present in proportions which are always constant in the same mineral. A mineral may consist of a single element, for example the diamond, gold, or native silver. As a rule minerals consist of two or more elements. According to Gerkie, "A rock may be defined as a mass of matter composed of one or more simple minerals, have usually a variable chemical composition with no necessarily symetrical external form, and ranging in cohesion from mere loose debris to the most compact stone. Granite, sandstone, peat, mud, etc., are all recognized as rocks.,'

Ques. Into how many classes are rocks divided?

Ans. Three, aqueous, igneous, and metamorphus, or into two divisions, stratified and unstratified.

Ques. What are the characteristics of the classes?

Ans. Aqueous rocks are those which have been deposited, where we now find them, by the agency of water, They are generally in layers or beds, lying parallel to each other, and are often called sedimentary deposits. Igneous rocks are those which have been subjected to the action of heat, and have retained no traces of stratification or bedding. Metaphorus rocks are rocks that have undergone change, a chrystaline rearrangement of the materials originally constituting the mass. Therefore they are sometimes called altered rock. Marble is an example of what is meant.

Ques. What rocks are most frequently met with in coal mining, and what are some of their characteristics?

Ans. Clay, shale, sandstone, limestone, fireclay and ironstone. There are various qualities and colors of clay. It is a substance which when moist is plastic, when dry, hard and friable; when burned, used for building and other purposes. Shale is an indosated laminated clay, which as a rule can be split into a number of thin parallel layers or laminæ. Shales, which contain a sufficient amount of bituminous matter to be employed for the extraction of paraffin, are called oil shales. Such shales at times pass gradually into cannel coals. Very fine oil shales are found in Scotland. The stellar coal may be called a rich oil shale. Shales are abundant in New Brunswick and also in Nova Scotia, though their values as oil producers has not yet been well tested. Sandstone is compressed sand, cemented together probably by oxide of iron. The variety of the cementing material is responsible for the color of the stone, red, brown, white, or grey. Limestone is composed of the calcareous remains of certain organisms. It is found in layers of various thicknesses. From limestone, when burned and mixed with sand and water, is procured mortar. Fireclay is a white, grey or blackest grey clay, found abundantly underneath coal seams, and is composed principally of silicate of alumina with small per centages of iron, magnesia, lime, potash, etc. It is principally used in making fire brick, which will not readily fuse. It is held that fireclay represents the original soil upon which the plants and flora flourished, that have in process of time been converted into coal. Very frequently in fireclay are found the roots of sigillaria, one of the plants which grew luxuriantly in past ages, and which have subsequently been converted into coal. Limestone as found in the coal measures, is composed of iron, clay and carbonaceous matter. When there is a heavy per centage of coaly matter it is called Blackband. Ironstone is found in pockets, leads or seams, from a few inches to many feet thick. Coal is the mineral which has resulted, after the lapse of countless years, from the accumulation of vegetable matter, caused by the falling of leaves, and the fading of plants and spores from luxurious growths which existed at an early age, and

these accumulated when the trees and shrubs grew that bore them, and formed in the first place, no doubt, beds of peat which have since been subjected to an ever-increasing pressure of accumulating strata above them, compressing the shedding of a forest into a thickness of probably a few inches of coal, and which have been acted upon by the internal heat of the earth, which has caused them to part to a varying degree with some of their component gases. By submitting very thin slices of coal to a strong light under the microscope it may be ascertained whether it has been formed from conifers, horse tails, club mosses, or ferns, or whether it consists of the sheddings of all, or as in some instances, of spores.

Ques. How many kinds of coal are there, and to what is due the variety?

Ans. Three, namely, Lignite, bituminous anthracite. The character of the coal has been determined by the facilities for the escape of the gases contained in the mass. A stagnant pool containing a large amount of vegetable matter, when stirred will show bubbles of gas rising to the surface from the mud below. This gas is known as marsh fire, or light carboretted hydrogen, and gases rise to the igneous fatuus which hovers about marshy land. The vegetable mud is undergoing decomposition, and as there is not strata to confine it the gases escape and the breaking up of the tissues of the vegetation goes on swiftly. The chemical changes which have taken place in transforming seeds or flowers or trees to coal is not yet well understood. All we know is that under certain circumstances one kind of coal is formed, while under other conditions other kinds have been produced. In some cases the process has resulted in the production of large quantities of mineral oils, such as petroleum. Mineral oils are found in very many countries. In all probability trees similar to our pines were the chief factors in the making of mineral oils. The gradually increasing heat met with, the deeper in the ground we sink, has been the cause of a slow but continuous distillation. Whilst the oil so distilled has found its way to the surface in the shape of mineral oil springs, or has accumulated in troughs, in the strata, and which flows when tapped. All coals have had a common origin; they are accumulations of ancient vegetation which has undergone chemical change under certain conditions. In the lignite and brown coal this change has been less complete than in the others. The following table shows the changes coal passes through in its transition from wood to anthracite:

	Weightf Cu t.	Specific Gravity	Carbon	Hydro.	Ox. & Nit.
Wood average,	35 lbs.	0.50	50 29	6.09	43.62
Peat "	50 "	0.85	60.83	5.89	33.23
Lignite "	20 "	1.04	67.43	5.59	26.98
Brown "	75 "	1.15	62.92	5.40	21.58
Bituminus "	80 "	1.30	83.48	5.34	11.18
Anthra. "	90 "	1.50	95.35	2.47	2.18

The conversion of vegetable matter into peat and ordinary coal, and then into anthracite, is brought about by a diminition in the quantity of hydrogen, oxygen and nitrogen, and an increase in the residual carbon. The gradual increase in weight is mainly due to compression during and after the transformation process. Lignite is of later formation, it has low heating power, and leaves much ash. Brown coal resembles Lignite, but is older and contains more carbon. Bituminous coals are misnamed, as they contain no bitumen. This coal burns freely, and gives off considerable smoke. Anthracite is most highly mineralized of all coals, and burns slowly without smoke.

THE TWO EXTREMES.

Everywhere, says an eminent historian, there is a class of men who cling with tenacity to what ever is established, and who, even when convinced by overpowering reasons that innovation would be benefical, consent to it with misgivings, and forebodings. We also find everywhere, he continues, another class of men, sanguine in hope, bold in speculation, always pressing forward, quick to discern the imperfections of whatever exists, disposed to think lightly of the risks and inconveniences which attend improvements, and disposed to give every change credit for being an improvement. "In the sentiments of both classes," concludes the writer of history, "there is something to approve, but of both the best specimens will be found not far from the common frontier. The extreme section of one consists of bigoted dotards, the extreme section of the other consists of shallow and reckless empirics.' Perhaps this old classification of the electorate may fairly be applied to the divisions in public opinion upon the power question and kindred issues. There are on the one hand the arrogant corporation partizans who would give the great consuming classes no consideration whatever; on the other are the eager crowd ready to confiscate property and rob shareholders. Between the two extremes stand those moderates who believe in the administration of public utilities for the benefit of the public but who in order to obtain that desirable end would resort only to fair and honorable methods. To confiscation they prefer purchase on a basis of equitable arbitration.

THE WONDERS OF COAL.

Has it ever occurred to you, says a writer in the Pall Mall Magazine, that the vanilla with which many a favorite dish of yours is flavored, is made from coal tar? Will you believe that most of the dyes which have stained the fabrics of your clothes, that the naptha and benzine which your tailor uses in removing stains, and that even the sweetest perfumes, are all of them derivations of coal? It was once said by a scientist, cleverer and more imaginative than most of his kind, that coal is "buried sunshine." Something of the enormous extent of ancient coal forming jungles may be conceived when ti is said that our present forests too, were subjected to a carbonizing process. The magicians who have wrought wonders with coal are the gas-maker and the chemist. It coal is burnt in the open air, heat is produced and nothing left but a little ash. Burn it in a closer vessel, however, and marvelous chanacs occur. In the first place, coal-gas is produced, and chemically treated, is supplied to every city home. Furthermore, ammonia is obtained, important in modern agriculture because by its means plants can be artificially supplied with the nitrogen they need. Then, again, asphalt is produced, much used in road-making, although the gas retort is not the chief source of ts supply. Lastly, a black, noisome ooze is collected which goes by the name of "coal-tar" It is this which, at the touch of the modern chemist's wand, is transformed into the most widely different substances imaginable. The wonders of coal-tar do not cease here. It is a palette of gorgeous colors, a medicine chest of potent drugs, a whole arsenal of terrible ex-losives, a vial of delicious flavors, and a garden of perfumes—the most protean, variegated substance in the world.

PERPETUL MOTION.

This from a contemporary:—For many years now perpetual motion has been a popular phrase, and many attempts have been made to demonstrate that such a thing is possible. As a matter of fact, however, it is about as impossible as it would be to get something out of nothing, and that is what the attempts amount to. The nearest approach to perpetual motion which is at present known to science is seen in the radium clock, as it is called. It is an invention of the Hon. R J. Strutt, and consists of an electroscope suspended from the lower end of a small glass tube containing a tiny piece of radium about the size of a wallflower seed. This is fostened to the top of a large sealed vessel from which the air has been extracted. In its disintergation the radium gives out what are called Alpha rays and Beta rays. The latter, which have a charge of negative electricity, get clear away from the radium chamber, while the former, carrying a positive charge remain inside, and set up an accumulation of positive electricity, which, by induction, charges the two leaves of the electricity, these leaves being charged with the some kind of electricity, repel each other until they touch the foil at the sides of the tube, which, having a metallic connection to earth through the glass, discharges them, and allows them to fall again and again and apparently, would go on for ever. If the radium were inexhaustible this would no doubt be the case, but, as a matter of fact, a diminishing process, though an extremely slow one, is going on. It is calculated that have the seed of radium would disappear in about a thousand years, so that a clock of this kind started in the year A. D. 1 would now be going at about quarter speed.

HOW COAL SPOILS.

That coal, after being mined, deteriorates rapidly unless used at once, has been established by recent experiments, of which the latest and most thorough are probably those made by the Chemical Department of the University of Illinois, in co-operation with the Illinois State Geological Survey and the Engineering Experiment Station. The rapidly extending practice of storing large amounts of coal makes this question of deterioration of vital importance. We are told by The Engineering Magazine, in an abstract of a review of the subject by S. W. Parr and N. D. Hamilton in Economic Geology, that storage plants with a capacity of 100,000 tons are not uncommon. A deterioration of one per cent. in value in such an amount evidently corresponds to a loss of 1000 tons, and it is shown that in a few months the loss of heating-power may be much greater than this, even reaching ten per cent. After five or six months, however, the deterioration appears to cease. Curiously enough, the only way to prevent it appears to be to store the coal under water, sheltered and unsheltered coal piles being equally affected so long as in contact with air. Says the Magazine just named:

"The samples subjected to outdoor exposure uniformly showed marked deterioration, but of varying amount. The treatment of the sample was identical, the coal remaining in shallow boxes exposed to the various temperature and moistnre changes from October to July. The variations in heat loss therefore ranging from two to ten per cent., must be ascribed to inherent properties of the coals themselves. All showed a tendency to disintegrate, but they varied distinctly with regard to the ease with which they crumbled under presure.

"The results of the tests on the coals subjected to a dry atmosphere and a slightiy elevated temperature were rather unexpected in that, with one exception in which the deterioration was practically the same, they showed a greater deterioration than in the case of outdoor exposure. This would seem to contradict the popular idea that a roof over coal in storage is supposed to be preferable to open exposure. The samples subjected to high temperature with frequent wetting down behaved in general like those exposed to outdoor influences, though in same cases a greater deterioration was observed in the former samples.. Here the results are undoubtedly variable in accordance with the variation of structure and composition of the coals themselves. In general a greater persistence of value might be expected in the dense and less friable coals and in those with less of iron pyrites throughout their texture.

"In conclusion, the authors summarize the results as follows:

"(a) Submerged coal does not lose appreciably in heat value.

"(b) Outdoor exposure results in a loss of heating value varying from two to ten per cent.

"(c) Dry storage has no advantage over storage in the open except with high-sulphur coals, where the disintegrating effect of sulphur in the process of oxidation facilitates the escape of hydrocarbons or the oxidation of the same.

"(d) In most cases the losses in storage appear to be practically complete at the end of five months. From the seventh to the ninth month the loss is inappreciable.

"(d) The results obtained in small samples are to be considered as an index to the changes affecting large masses in kind rather than in degree, but, since the losses here shown are not beyond what seems to conform in a general way to the experience of users of coal from large storage heaps, they may be not without value as an indication of weathering effects in practice."

The Annual General Meeting of the Shareholders of the Dominion Wire Rope Company, Limited, for the election of Directors, etc, was held at the Company"s Head Office, Imperial Bank Chambers, Montreal, on Thursday, Feb. 20th, 1908. The following Directors were unanimously re-elected for the ensuing year, viz: F. W. Fairman, F. H. Hopkins, C. W. Colby, Geo. P. Butters, E. E. Fairman.

At a meeting of the newly elected Directors, held subsequently, the following officers were unanimously re-elected for the ensuing year, viz: F. W. Fairman, President; F. H. Hopkins, Vice-President and Man. Dir.; J. J. Rosevear, Secretary and Treasurer.

The Nova Scotia Steel & Coal Co. are prospecting for iron at Whycocomagh. While some of the ore carries over 50 per cent. of iron, some of it is less than that, so that the average is not so high as desirable. It may be higher in iron as the prospecting proceeds.

ONE FOR THE PROVINCE,
—TWO FOR RECIPROCITY.

Our very good friend W, C. Milner, Sec'y. of the Free Coal League, an association which Mr. Dick,—at Ottawa, demonstrated consisted of two individuals and a corpse, has bobbed up again in the Herald with a long article, a plea professedly for cheaper coal for the province, in reality an ingenious attempt to bring about reciprocity through the abandonment of the Montreal market by the Nova Scotia mine operators. It will not do.

Mr. Milner has in respect of the cost of mining coal undergone a change of heart, though likely he will be the last man to admit it. He says the cost of mining has increased, of late years, notwithstanding the introduction of compressed air, electricity and mining machines. He admits wages are higher, material has increased in price, and that costs generally have increased owing to the increasing depth of our mines. So far so good.

With these difficulties before us, Mr. Milner asks how are manufacturers and householdere to get cheaper coal, and then he tells us, in a wonderful narrative, which we have not space to publish in full, how it is to be done. Of course none of the coal companies, except the Dominion Coal Company, are big enough game for Mr. Milner, so he, following his old practice, shoots away at this company. He asks this question: "How can the Dominion Coal Co. provide cheaper coal and at the same time make a reasonable profit", and he proceeds to try and show how easily it can be done:

"The larger the output the farther abroad the market must be sought, the keener the competition with the other coal producers and the less the profit. The domestic market is the one near at hand and therefore the most profitable. When that is filled up, the balance of the output has to go abroad and run the chances of slaughter prices. No matter how satisfactory the prices are in the home market, the average net results may be very meagre and unsatisfactory."

Then after attempting to show that of the total output of the province two-thirds go to Everett, the St. Lawrence and the Steel Co., Mr. Milner says there remains a million and a half tons for the home market and that this third has to stand the bond interest and the dividend earning power of the company. To meet these demands, Mr. Milner declares, to put it shortly, that Nova Scotians have to pay through their noses. Then continuing Mr. Milner says:—

"Another feature of this excessive and unprofitable output is even more subject to criticism. The exhaustion of the mines from this class of business since 1892 has probably reached fifteen millions of tons This enormous quantity has disappeared with very little advantage to the people of Nova Scotia, however great it may be to the shareholders of the companies benefitted. This coal can never be replaced. If in situ to-day (remembering its favorable position for cheap working) it could be mined at not much over $1 per ton. If sold at $1 per ton profit, it would more lhan liquidate half the entire stock and bond capital of the company and make the people of Nova Scotia fifteen million dollars richer."

"The public franchises and mines and minerals of the province are sources of great industrial activity and wealth if properly conserved to the public use. The tendency to divert them into private hands and to squander them to obtain immediate results is bearing appropriate fruits. . . . . .

"Prudence dictates a reverse of this process. The waste of our coal resources on large low priced contracts for the benefit of outside capitalists, while our own people are taxed enormously on their consumption to make up interest and dividends will tend to check our mechanical and commercial progress and imperil our prosperity as a province. If the process be reversed—an end be put to the large low price contracts—for which our province receives no great benefit. there will be diverted at once a large quantity of coal, at competitive prices, to stimulate all the mechanical, manufacturing and industrial operations of the province"

Mr. Milner's remedy for alleged dear coal to Nova Scotians is abandon all outside of the province markets; reduce the output from 4,500,000 to 1,500,000 tons. A most wonderful remedy surely. If, mining the larger quantity, it cannot be sold in the St. Lawrence, with profit, at about two dollars net, how could it be sold in Nova Scotia, mining the smaller quantity, at about $2,25 net. When he says "this immense quantity has disappeared with very little advantage to the people of Nova Scotia, however great it may be to the shareholders of the companies," Mr. Milner states what he ought to know is wide of the mark. The people of the province generally have been the great gainers and not the shareholders of the companies. If householders have paid higher for their coal, they have been placed in a position to be able to do so, through the great activity at our mines and the enormous circulation of money paid in wages. Leaving out the steel industries there are as many men employed in coal mining as in all the other manufacturies—being large coal consumers—in Nova Scotia If coal had not been sent outside there would have been employment for only a third of the present force of colliery workers; there would be no winters work for Cape Breton miners, the provincial treasury would suffer to the extent of two or three hundred thousand dollars a year, and things generally would be in the condition they were in the eighties—at a standstill all over the province. If the output was cut down to a third of what it now is, then the farmers of all the counties in which coal mining is carried on, and those adjacent, would be sending eggs to Boston fetching eight cents a dozen, and butter netting ten or twelve cents. As between dear coal and a return to conditions as in the eighties, nine householders out of ten will hold up their hands for the former. Mr. Milner is not writing in the best interests of the province. If the output is curtailed shipments to the St. Lawrence must be abandoned. And what then? The railways, the C. P. R and the G T. R. will say to the Government:—'Abolish the duty so that we may get from the United States what the Nova Scotia operators refuse to give.' The collieries are now equipped for big outputs, and from this out outputs will increase notwithstanding all that a dozen free coal leagues may say or do.

Dr. Kendall, as we expected, has asked for a lot of information from the Dom. Coal Co. for the Conciliation Board which the company is not likely to give him, unless under great pressure.

MARITIME MINING RECORD.

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STELLARTON. N. S. MARCH 11

OLD AGE PENSION REPORT.

The Report of the Commission, appointed under the provisions of Chapter 16 Acts of 1907, entitled "An Act Respecting Old Age Pensions and Miners Relief Societies," whose duty it was to enquire into the feasibility of adopting some scheme providing old age pensions for workmen, or to be more precise, colliery workers, was placed before the members of the legislature some fourteen days ago. The Report covers 134 printed pages exclusive of the draft Act for the pension scheme, and a draft constitution for the Nova Scotia Colliery Workers' Provident Society. The government concluded as there were only drafts, subject to amendment and revision, they might well at this time be omitted. Mr. Tanner, the leader of the opposition, thought that had the Act and the Constitution appeared as an appendix, the general reader of the report would be in a better position to understand what was in the minds of the Commissioners when they were framing the report. He further said that the report gave evidence that the Commissioners were men who evidently had gone intelligently into the subject, and any suggestions they had made would be worthy of consideration.

The Commissioners enquired more particularly into the following subjects :

1. The feasibility of a pension scheme for workmen generally.
2. Of a scheme for colliery workers alone.
3. The organization, administration, etc., of the present Relief Societies.

On the first point the Commission pronounces the opinion that there is no desire for a general pension scheme, and even if there was such desire it is not feasible owing to the limited financial resources of the government.

The Commission found, under the 2nd head, that there is a strong desire among the colliery workers for an old age and permanent disability pension fund.

The Commission, though they think the ideal scheme might be the merging of "relief' and "pensions" into one society, report against any merger on account of the conditions which have grown up around the Relief Societies, and the prejudices that might be aroused by such a proposition.

The opinion of nearly all the witnesses examined was that a pension fund should be created by contributions from the colliery workers, the employers and the government. Whatever may be urged against old age pension schemes in general, none of the common and well understood objections can be forcibly advanced against such a scheme with three contributing parties. The Commission therefore contend that no extended argument is needed to justify the adoption of some scheme in this province whereby men who have been totally disabled in or about the coal mines, or have reached old age, with its consequent inability to earn a livelihood, or a partial livelihood at any occupation, should share in the benefit of a fund to which they have been the main contributors.

The Commission think the government may well justify itself in making a contribution to this scheme, based to some extent on the portion paid by the men themselves. The coal mines are, perhaps, the greatest provincial asset, and the coal royalty therefrom is the only item of provincial revenue which seems to be capable of any great expansion. The Commission ascertained beyond all question that miners do not continue to follow the occupation. In former times the growing demand for labor at the coal mines was met by sons of miners, but these apparently are no longer available, and of late years there has resulted a large importation of foreigners. Whether this is desirable or not is not for the Commission to discuss, but it emphasizes the conclusion that any legislation which would make the occupation more attractive to our own people would be desirable. Nor do the Commissioners think that any strong objection can be offered by the operators who should be asked to contribute. In the event of a fund being established, it is distinctly understood that a compulsory contribution towards sickness, accident, total disability and old age pension funds is incidental to coal mining in Nova Scotia, and that every loyal Nova Scotian colliery worker shall participate in the benefits.

Towards the establishment of a disability and pension fund the Commissioners make the following suggestions :

Chapter 25 Revised Statutes to be recast : that a permanent board, to be called the PENSION BOARD, should be formed which should have wide powers of framing regulations for the organization and administration of the scheme, but the same to be subject to the approval of the Governor-in-Council. We would suggest that this Board might well consist of the Honorable Commissioner of Works and Mines (Chairman); the Provincial Treasurer (Treasurer); the Deputy Commissioner of Works and Mines (Secretary); one representative to be named by the coal operators of the Province, and failing such nomination, one to be appointed annually from their number by the Governor-in-Council; and two representatives to be appointed for a term of three years by the Council of the Relief Societies (which will be hereafter referred to). The Board shall be empowered to employ all necessary officers, actuaries or otherwise, and should be authorized to invest any surplus funds in the securities authorized by law.

The larger part of the time of the Commission was taken up by inquiring into the workings of the various relief societies. The majority of these societies were first organized under the provisions of Chapter 21, Acts of 1889 (now substantially Chapter 23, Revised Statutes), and beyond all question have been of great benefit in being the

means of caring for the members in cases of illness or accident, and in relieving widows and orphans to whom, under their constitutions, a death benefit or insurance is paid, and also a weekly allowance for a longer or shorter period. The death indemnity provided by the Societies is supplemented by a grant from Government of $50.00, paid under the provisions of Chapter 10, Acts of 1903. It is difficult to calculate the amount of distress which has been alleviated by means of these Societies, and we cannot withhold our praise of the officers who stand by and manage them, often for very inadequate, and in many cases for no remuneration at all. They are Societies in which most of the members take great pride; some have had prosperous careers from the date of their organization; others have had ups and downs; in some cases disasters have swept away their funds, and they have had to begin practically over again with increased dues; others have languished apparently from the beginning. The result is that there are in Nova Scotia sixteen of these Societies—some large and flourishing with handsome surpluses others just able to meet their obligations, and one or two which are weak.

While conceding to these Societies all the praise due them, we are now to point out that there are many anomalies in their organization and administration. At first we may remark that we have been impressed with the fact that where the management has been systematically and continuously prudent, there has been success, so that on the whole, apart from local conditions, it is safe to say that the success of individual Societies has been and will be due to the management. Given a flourishing Society, with all the legitimate claims attended to, and a good balance in bank, it can safely be stated that the trustees and committee are faithful in their duties; whereas slack management, meetings of the officers rarely held, claims not sufficiently investigated, have produced weak and inefficient Societies. This question of management and how it can be made more efficient all round, we shall discuss later on.

There seems to be a wide difference as to what men engaged in and about the coal mines shall be eligible for membership. Some societies for instance include coal trimmers, railway hands and mechanics; others exclude them, though it is obvious that these classes of workmen are just as essential to the operation of coal mining as any other.

Another striking feature as disclosed to us is that very few of the societies charge the same dues. In some, boys below 17 years are charged a lower rate, in others the earning of a dollar a day makes the man's rate compulsory. In many Societies boys and men pay the same rate. In others again there is a lower and higher rate for the men These rates seem to be worked out on no principle which we could discover. We think it obvious that the rates all through the Societies should be the same.

Again, there is a wide discrepancy as to the weekly benefit for sickness and accident, and these again seem to bear little or no relation to the dues paid. There is a similar discrepancy in the amount of the death indemnity. Here, too, we think it obvious that there should be a uniform rate for benefits and indemnities. . . . . An examination of the statistics appended to this report shows that the contribution of the Government works out very unequally in the case of different Societies. It will be noted that the Government share in proportion to the amount paid by the members varies from 16 per cent. in the lowest case to 49 per cent. in the highest. This is an anomaly so serious as to demand an immediate remedy. The difficulty arises in connection with the basis of payment which in our judgment is no longer applicable to the changed conditions of our coal mines. We suggest that the contribution of the Government shall be 50 per cent., and of the employers be fixed at 25 per cent· of the per capita amount paid in by each member of the Society·

The greatest weakness of these Societies is their entire lack of co-operation one with the other. In fact, not only do they make no pretence of co-operation, but each proceeds on the principle of excluding all others. Thus most Societies have a rule debarring from membership for a longer or shorter period any new worker at the colliery, or if the power of some constitution is invoked he may be debarred altogether if his health is broken. The hardship of this will be recognized when it is considered that such a worker may have contributed for the best years of his life to some Society whose surplus he has helped to build up. Nor is there any provision by which any part of the surplus funds earned by one Society is or can be made available for all. The anomaly is thus presented of each Society holding on to its own surplus funds, regardless of who has built them up. The Societies are therefore purely local, and liable to local vicissitudes, and so the Society which should, perhaps from the necessity of the case be the strongest, is left to struggle alone.

All these difficulties would disappear if the colliery workers of Nova Scotia—some 12,000 in number—were organized into one large Society with local branches, with all the funds amalgamated and available for all, and thus the prosperous would help the weak. It seems there are strong, and perhaps not unreasonable objections on the part of those Societies which have by prudent management built up a reserve against putting their accumulations into a common fund and helping out Societies which, by poor management, or the lack of it, have come near the verge of extinction. Perhaps, too, the amalgamation of funds, unless surrounded by the most careful safeguards, would increase the liability to imposition, from which many indeed of the Societies now suffer. But none the less we think it plain that some check should be given to the individualism of these Societies, and a stimulus at least in the direction of unification.

We have to recommend in this connection that the Government take over the care and management of all the funds of the several Societies in excess of say $1000.00 and that these funds be kept intact to the credit of the several existing Societies, and the highest rate of interest be allowed thereon.

We suggest that in order to ascertain that books are kept in uniform and proper order, funds properly disbursed, and that generally the constitution is complied with, some officer of the Gov-

ernment or of the Pension Board be appointed as Inspector of these Societies; such anofficer should, besides making a periodical inspection of the management of these Societies, also compile all the yearly statistics, and make a report to the Government as to their administration annually.

As incidental to the whole question of relief for the colliery workers of Nova Scotia, we have been agreeably surprised at the unanimous opinion expressed as to the desirability of forming in this Province an Emergency or Disaster Fund. The frightful explosion at the Drummond mine in 1873, when some 50 lives were lost, followed by that at Albion Mines in 1880, when 50 men lost their lives, or the great catastrophe at Springhill in 1892, when 120 lives were lost,were disasters so appalling that contributions flowed in from the public of Canada in large amounts. Accidents of such an appalling nature as these will always appeal to the charity of the public. Recent disasters in the coal mines of the United States, by their magnitude, have shown that the charity of the public, abounding as it is, is not large enough to meet the demands. There is a lesson in these disasters for Nova Scotia. In any case it is, to say the least, anomalous that when such disasters occur funds should be available to care for the widows during their lives, or until married, while in the case of the numerous deaths yearly occurring at our coal mines, there should be no fund available save the ordinary relief funds with their necessary restrictions. We are of the opinion that such an emergency or disaster fund should now be created and kept intact in the hands of the Government Such fund might well be created from the following sources:

(a) Ten per cent. of all surplus relief funds over $1000.00, now in the hands of the several Relief Societies;

(b) A capitation tax of 30 cents per annum from each Colliery worker;

(c) A special grant from the Government of $2000.00 per annum in lieu of the grant mentioned in Chapter 28, Acts of 1901.

This fund should be permitted to grow by its own accretions, and the main idea is that it should be available only for grave disasters. When such fund exceeds $50,000.00 we would recommend that the widows, while widows, of all persons killed in the operation of the coal mines of Nova Scotia should, after having been on the local branch for one year, be entitled to enjoy a similar benefit at the expense of the Emergency or Disaster Fund. The children of such persons should be borne on the local Relief Society Funds in accordance with the draft constitution, submitted until the Disaster Fund reached the sum of $100,000 00, when the Branch Societies might be relieved of the burden. Proper regulations should be framed and the whole management of this Fund be left in the hands of the Pension Board.

(Continued in next issue.)

By an amendment to the Mines Regulation Act it is proposed that no boy not already at work, will be permitted to be employed in a mine who has not passed the seventh grade. As the law reads at present, it is only required that he be able to read and write, and be able to count as far as division.

- Rubs by Rambler.

I am not prepared to admit that I am greatly in love with any scheme of Old Age Pensions, though I can readily reconcile myself to any scheme the chief feature of which is a substantial regular contribution by those who are to be the likely beneficiaries. And I willingly admit there are great possibilities in any scheme which includes, besides the contributions of the workmen, those also from employers and the Government. I am inclined to think that if that most wonderful old man of the age, General Booth heard of the scheme proposed in Nova Scotia, he would clap his hands and exclaim, "I have anathematized old age pensions, but not the kind propounded for Nova Scotia." While General Booth and many others have objections to non contributary, on the part of workmen's old age pensions, on the ground that they would be detrimental to thrift, they cannot urge any such objections to a scheme to which the intended beneficiaries are the chief contributors. Indeed, the scheme proposed for Nova Scotia may be called a scheme compelling to thrift, such a scheme as is proposed by Mr. Asquith for the British workmen, would never. with our mode of luxurious living, do for Nova Scotia To tell you the truth I cannot well see how it will be of any great benefit to a vast majority of the British aged. They may be able in Britain to see how five dollars a month will keep together the soul and body of a feeble old man; here in Nova Scotia the most vivid imagination cannot picture the way out. In a British paper Miss Edith Sellers discusses "Old Age Pensions and the belongingless poor." She visited a number of workhouses in various districts, and inquired into the conditions of something like 2,200 inmates, and into the possibility of their subsisting outside on pensions of 5s. a week. Taking the workhouse as typical, she concludes that not more than 76 of the 76,99 odd inmates would be able to return to their own people, if a pension law were in force. Probably ten times this number and more would quit the workhouses, but the more worthy would drag out a miserabe existence till compelled sooner or later by increasing infirmity to return, while the less worthy would be sources of trouble, anxiety and expense to the community. Miss Sellers believes the shiftless old folk are far better kept in the workhouse, while the worthy should be provided for in old-age homes, which need not be many nor very large. The British workmen are opposed to contributing to a pension scheme, but would it not be better to do so if assured that in old age they would receive an allowance on which they could keep the wolf from the door. Or there might be two kinds of pensions, for those who contributed and for those who cannot. It is likely true that there are many in Britain who cannot lay by a penny. Let the State provide for such. In this connection let me quote the opinion of a British workman: "As a working man individualist" Mr. James G. Hutchinson, a level-headed Yorkshireman, in The Nineteenth Century, ask 'Can the working class save?' and answers the question in the affirmative. He is not in love

with state-provided old age pensions, but prefers that working classes should learn to help themselves. He admits that the only wage-earners who can save are those in fairly regular employment. He compares two such men—one who earns 27s. a week, and pays 2s 6d. a week to a building society, which means, with principal and interest, a capital sum of £100 in thirteen years, and another who can earn £2 1s. 8d. a week but religiously keeps St. Monday, boasts that he has a 5s. 'ale-shot' to pay every week, and has a home that would not fetch a £5 note. Mr. Hutchinson is not a teetotaler, but he says a tithe of the £110,000,000 a year spent by the working classes on drink would at one stroke solve not only the question of work and wages for the masses, but also that of their physical and moral deterioration. And this reform the working-classes can accomplish if they will.' Gambling also eats heavily into their income. Lamentable ignorance of domestic economy leads to much waste."

THE M'CULLOCH BROOK FAULT.

One well conversant with the geology of Nova Scotia—and yet not a member of the Geological Survey, writes:—" . . . . So many items of local interest. It is always a marvel to me that you manage to secure so many, and of such variety. May I comment on those relating to the McCulloch Brook fault and the geological map?

"The western half of the map of Pictou Co. was compiled from notes by Hartley, who had died. The compiler had no local knowledge, and some notes were not understood. Certain data supplied by the Drummond Mine affected the assigned position of the fault. Subsequent working proved these data to be wrong. In the revised map the fault in part is shown as a 'broken' line southward of the railway bridge over the brook, indicating that the position is in doubt, and I have yet to learn that the position is 100 yards out of place. At the bridge the fault was proved as there shown. I suppose part of the talk regarding the inaccuracy of the map is due to no one having taken the trouble to reduce the plan of the Drummond workings to the same scale as the geological map, and then comparing them. I believe when this is done the deep workings will be found to nowhere have crossed the theoretical line of the main fault a distance of 100 yards."

Now, the above is quite clear and contain, a challenge to those who have been pouring contempt on the position, on the map, of this fault. The Record will be glad to hear as soon as the workings have crossed the line and are 300 feet beyond.

AN INTERESTING WITNESS.

Last July, before the British Commission on Mines, Mr. D. A. M. Robertson appeared to give evidence on behalf of the New South Wales Government, and while on the stand gave evidence on other matters. What he said on two points is, we think, worthy of consideration, so we quote the following:

"Witness said that a Bill was brought in requiring all men in charge of machinery of every class to hold certificates, but after representations were made to the Minister he altered it, confining the certificates to winding engine drivers only. The Mines Inspection Act of 1901 applied to metalliferous mines only. There was a reason for that. In metalliferous mines nearly every body in charge of machinery had occasion to wind men up little staple shafts and so on, but in coal mines it was only the winding engine drivers who had to wind the men. In coal mines now winding engine drivers required a certificate of competency, but witness regarded the provision as a great mistake, for he maintained that a winding engine driver's duties were such that they could not find out his qualifications for the position by examination. They did not need a man nowadays having a knowledge of mechanics—at least a very intimate knowledge of mechanics—for the position of a winding engine driver. He was sitting there all day long and had not to go near the boilers—in fact, he did not need to supervise them at all. In all collieries nowadays there was a mechanical staff looking after the condition of the machinery. They did not examine periodically for physical conditions. Under the Act there were some certificates of service granted, and the candidates for certificates at examinations had to produce medical evidence of their fitness. There was a good deal more reason for such a periodical examination than the examination for competency in other respects. At the same time they had never had any accidents. He would much sooner take a certificate of character or fitness from another manager than he would take the certificate of the Government He himself had two winding engine drivers who had been performing their duties for about eighteen years, and under very difficult conditions, and they had never made one mistake, but he was also absolutely certain that if they were put through the examination most assuredly they would be plucked. He had another young fellow, only about twenty-one, who was absolutely incapable of handling these winding engines, and still he had a certificate. Experience in the Transvaal from all accounts was rather unfortunate. They all had certificates there, and in no part of the world were there more accidents in mining shafts.

"Witness said they were troubled with blackdamp in some of the collieries. They had a very curious composite gas in his own colliery; it might be the only instance known where carbonic oxide was given off naturally from the coal. There was the curious circumstance of firemen searching on the roof and also on the floor for firedamp. The gas was a composition in many places of carbonic oxide, carbonic acid gas and firedamp, and they very often found it on the floor, and it showed that characteristic blue cap on the floor just the same as on the top. As a rule, where they had it on the floor it was clear on the top, but they certainly had carbonic oxide given off naturally from the coal, and not from any combustion of powder or coal. That carbonic oxide did not cause much practical inconvenience, and he was inclined to think that scientists were a little out with respect to the percentage that a man might work in. He reported it to the Department of Mines and they all laughed him to scorn at the idea of carbonic oxide being given off naturally, but he had it analysed at considerable cost, and by a chemist from the Department of Mines and his opinion was confirmed."

A gentleman named Ritchie, a United States engineer of eminence, has been making a thorough examination of the Springhill collieries in company with a deputy inspector. He was also in Cape Breton making himself familiar with conditions there.

Coal Shipments February, 1908

INVERNESS RAILWAY & COAL CO.

Shipments Feby.	1908	15 699
" "	1907	11 867
Increase Feby.	1908	3 832
Shipments 2 mos.	'08	34 091
" 2 "	'07	27 802
Increase 2 "	'08	6 289

NOVA SCOTIA STEEL & COAL CO.

Shipments Feby.	1908	41 230
" "	1907	25 245
Increase "	1908	15 985
Shipments 2 mos.	'08	88 980
" 2 "	'07	55 974
Increase 2 "	08	33 006

CUMBERLAND RAILWAY AND COAL CO.

Shipments Fbey.	1908	35 400
" Feby.	1907	25 378
Increase Feby.	1908	10 022
Shipments 2 mos.	'08	72 415
" 2 "	07	47 805
Increase 2 "	08	24 610

ACADIA COAL CO.

Shipments Feby.	1908	24 175
" Feby.	1907	19 261
Increase Feby.	1908	4 914
Shipments 2 mos,	1908	53 608
" 2 "	1907	45 489
Increase 2 "	1908	8 119

INTERCOLONIAL COAL CO.

Shipments Feby,	1908	20 387
" Feby.	1907	18 418
Increase Feby.	1908	1 969
Shipments 2 mos.	1908	45 335
" 2 "	1907	42 152
Increase 2 "	1908	3 183

DOMINION COAL COMPANY, LTD.

Shipments Feby.	1908	191 871
" Feby.	1907	168 273
Increase Feby.	1908	23 598
Shipments 2 mos.	1908	393 934
" 2 "	1907	331 195
Increase 2 "	1908	62 739

THE CONCILIATION BOARD.

Some of the C. B. papers are not in a very amiable mood on account of the reporters being interdicted from taking reports of the proceedings. It does seem a little strange, while visitors might publish on the streets reports more or less garbled, that the press was forbidden to give a fair summary. Had the people generally been excluded from the court the Board might not be open to the charge of glaring inconsistency. The Record undersood that the Lemieux Act trusted largely for its effectiveness on public opinion. That is, that while the Board could not enforce its award, the pressure of public opinion would make the ousted party submit. How can the public bring just pressure when there is total ignorance as to the merits of the decision. No doubt in a hearing private matters may be divulged; in such event the reporters might be enjoined to silence, and would at once comply.

The mines in Pictou Co. are greatly handicapped by a shortage in the car supply. Both the Acadia and the Drummond collieries lost time last week through this cause.

A gentleman named Ritchie, a United States engineer of eminence, has been making a thorough examination of the Springhill collieries in company with a deputy inspector. He was also in Cape Breton making himself familiar with conditions there.

The slope at the Joggins is now down within two hundred feet of the required distance for the breaking off of the level. This distance, it is expected, will be accomplished within two months. The seam, during the course of driving the slope, showed no rolls or minor faults, but in the whole distance maintained an average thickness of over four feet on top and twenty-two inches of bottom coal. The fireclay between the top and bottom of the seam may not be taken out except in the levels, as it may not pay to lift the bottom coal in the room.

In last issue, in the article on the Port Hood disaster, when referring to the action and effects of powder, our argument against any powder explosion would have been strengthened had we not for the time forgotten about the explosion of powder in the Inverness mine last year, and of which accident we are reminded by an allusion to it in a timely article in the Inverness News. At the time of the powder accident in that mine there were some five cans of powder near the place and a number of men in close proximity. And yet there was no great disaster, nor was any damage done to the mine.

Those members of the P. W. A. who think they might be advantaged by substituting the American U. M. W. for the P. W. A., should digest this short but comprehensive item from the Coal Trade Journal, New York: "U. M. W. is endeavoring to corral the P. W. A. of Nova Scotia. That would be a sort of long distance arrangement. With this there would be the opportunity for American coal to get more trade in the middle Canadian markets." And so it is to bring grist to their own mills that the U. M. W. are so very solicitous to have controll of the P. W. A. It is to be hoped there are sufficient in number of open-eyed P. W. A. men to nip the philanthropic purpose in the bud.

AROUND THE COLLIERIES.

What are needed at the Mabou mines are houses for the workmen. It is understood the Company by itself, or a holding company, will erect a number of houses at an early date.

One of the planks of the Labor Party is the prohibition of female labor at the mines. Well, there is no record of females ever having been employed in the coal mines of Nova Scotia.

The sinking of the slopes of the Mabou mine went on double shift the first of the month. It is expected they will be down far enough by the time shipping begins to permit of another lift.

Another balance has been started at the Mabou mine A turn out is being made inside of a short one, for a double balance 800 feet further in. There will soon be places for a number more miners.

The big Wash Plant of the Dom. Coal Co. was burned to the ground last Sunday. This is the second wash plant to be destroyed by fire in two years. It is hoped the Everett people will take for a while unwashed slack.

What are called double balances are coming more into vogue. There is one at Chignecto, in addition to two or three at other collieries. The single balance may have its advantage when development work is behind and places needed.

The new Manager of the Inverness Railway & Coal Co. expects a much larger output than last year from the fact that by the summer the mine will not have one side only. The diversion of the slope will enable coal to be brought from both sides, thus saving much haulage underground. A drift is also being proceeded with to tap the big seam from which some coal may be obtained towards the fall.

A correspondent makes the suggestion that at coroners' inquests in connection with mine fatalities the Deputy Inspector should be empowered to employ counsel, giving as a reason that it is possible that lawyers, for others interested in the cases than the Government, are often successful in preventing the whole truth from being brought out. The suggestion may be applicable to the P. W. A. as well as to the Government.

In order to do its part in the encouragement of the steel industry, the Local Government agreed to pay back to the Steel Co. half of the royalty paid on the coal it consumed. This giving back of the half was called a rebate, though that is scarcely correct, as the Steel Co. pay no royalty; that is paid by the Coal Co. The period for which the so-called rebate was given expires in a few months, and some pressure has been brought to bear upon the Government to continue it for a further term of years. The probability is that owing to the many growing needs of the Province, and the demands on the financial chest, the Government will regretfully be forced to discontinue the rebate in whole or in part.

The N. S. S. & Coal Co. has 30,000 tons, or more, less coal on bank than at this time last year. The coal has all been shipped as it came from the mines in January and February, with the exceptions of a few thousand tons. The bank this year will not likely go over 45,000 tons.

A correspondent of the Ottawa Citizen in endorsing that paper's demand for Government interference in the Steel-Coal dispute, advances as an argument in favor of such a course the following:—The Provincial Government, which practically fathered the original enterprise, has already made and continues to make "substantial concessions in respect of royalties to aid these twin industries." That is scarcely correct. The Dominion Coal Co. obtains no concessions whatever. Instead, it pays the Government a higher royalty than any of the other coal companies. The Steel Co., however, gets from the Provincial Government the half of the royalty paid by the Coal Co. on the coal sold to the Steel Works, and with all its getting the Steel Co. would like more.

The saying "Give an inch and they take an ell," may, in the case of certain C. B. correspondents, be made to read, "Given an inch we make it an ell." They get hold of a little piece of news, and forthwith it is transformed into a wondrous affair. For instance: In last Wednesday's Herald is a statement that the Nova Scotia Steel & Coal Co. are making shipments to the D. I. & S. Co. in fulfilment of a million ton contract. It is true the N. S. Steel Co. is shipping coal to Sydney, and in so doing they are filling a fifty thousand ton order, received last summer. The contract calls for 5000 tons per month. As the N. S. S. Co. did not supply any in the busy shipping season, a larger quantity than 5000 tons is going forward in order that the contract may be completed in April.

Referring to the Port Hood explosion a correspondent writes: "There was a coincidence in connection with that explosion, that possibly you may have noticed, in the fact that an earthquake occurred in the State of New York which was seriously felt as far north as northern Maine. Now, it may be a long-fetched theory to try and connect this with Port Hood, but in my mind there is a possibility that the tremors of the earth's surface during such occasions will liberate gas, especially in bituminous coal mines, and this might possibly have occurred at Port Hood. I do not wish to elaborate on the theory in any way, but following the explosions on this continent and in Europe, I think if you have sufficient data you will find that some of our recent explosions have occurred not a great time after the earthquakes on their respective continents. Only one point I am strong on, and that is I do not believe that naked lights should be used in any coal mine, of anyextent, at all, especially bituminous mines are likely to have gas, and some of them dust, and no one can tell the day or the hour when it is going to be released from the coal and get stowed away in some corner and will cause an explosion."

The Nova Scotia Steel & Coal Co. have very little coal banked as compared with the quantity on bank at this time last year. There is probably ten thousand tons banked instead of fifty. This, of course, means something of a saving to the Company. Besides the convenience of having money on hand instead of being in a coal bank losing interest, there is the saving of the cost of re-handling and the less amount of slack coal.

Dr. Clarke, from Wash, U.S, who came to enquire into the workings of the Conciliation Board, arbitration, strikes etc. attended the meeting of the Conciliation Board at Glace Bay last week. Previous to that he had talks with Premier Murray and other prominent men of the province.

Synopsis of Canadian North-West.

Homestead Regulations.

ANY even numbered section of Dominion Lands in Manitoba or the North-west Provinces, excepting 8 and 26, 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 situate. 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 the applicant, and if the land applied for is vacant on receipt of the telegram, such application to have priority and the land will be held until the necessary papers to complete the transaction are received by mail.

In case of "personation" or fraud the applicant will forfeit all priority of claim 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.

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, brother or sister, if eligible, but to no one else, on filing declaration of abandonment.

The homesteader is required to perform thehomestead 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 premanent 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 homestead entered for by him in the vicinity, such homesteader may perform his own 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 pefform 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 320 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 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 mining recorder in lieu thereof. When $500 has been expended or paid, the locator may, upon having a survey made, and upon complying with other requirements, purchase the land at $1 per acre.

The patent provides for the payment of a royalty of 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 lessee shall have a dredge in operation within one season from the date of the lease for each five miles. Rental $10 per annum for each mile of river leased. Royalty at the rate of 2 1-2 per cent collected on the output after it exceeds $10,00.

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

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

IN Lots To Suit Purchasers.

BEST COAL FOR DOMESTIC CONSUMPTION.

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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, C. B., of most modern type. Steamers carrying ——6000 tons loaded in 24 hours.——

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

: : BUNKER COAL : :

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

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

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

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DOMINION COAL COMPANY, LIMITED, Quebec, Que'

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