MARITIME

MINING RECORD

AND

COAL AND METAL TRADE JOURNAL.

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

New Series Vol. 9 No. 16 February 27th. 1907 STELLARTON, N. S

INTERCOLONIAL RAILWAY

On and after Tuesday January 15 1907 trains run daily, Sunday excepted,) as follows :—

—TRAINS LEAVE STELLARTON—

No 144 Mixed for Hopewell—	
No 79 Mixed for Trenton	5 55
78 Mixed for Hopewell	6.30
18 Express for Halifax, and St. John	6.55
21 Mixed for Pictou Landing	7.40
62 Mixed for Pictou	7.40
55 Mixed for Mulgrave	7.45
19 Express for Sydn y	8.30
28 Mixed for Pictou	11.10
56 Mixed for Truro	11.15
139 Mixed for New Glasgow	13 55
20 Express for Halifax and Montreal	15 40
140 MiXed for Pictou	15.45
101 Mixed for Pictou Landing	15.50
22 Mixed for Ho ewell	16.50
65 Mixed for New G asgow	18.10
17 Express for New Glasgow	19.30
66 Express for Pictou	21.35
	21.40

—TRAINS ARRIVE AT STELLARTON

79 Mixed form Hopewell	
78 Mixed from Trenton	6.30
61 Express from Pictou	6.55
18 Express from New Glasgow	7.30
21 Mixed from Hopewell	7.35
55 Mixed from Truro	7.36
100 Mixed from Pictou Landing	8.00
28 Mixed from New Glasgow	9 20
27 Mixed from Pictou	10.55
56 Mixed from Mulgrave	10.56
19 Express from Halifax and St John	13.35
139 Mixed from Pictou	11.00
20 Express from Sydney	15.30
22 Mixed from Pictou Landing	15.35
77 Mixed from Hopewell	18.10
66 Mixed from Pictou	18.45
60 Express from New Glasgow	19.36
17 Express from St John and Halifax	21.35

All trains are run by Atlantic Standard time Twenty four O'clock is mid-night. Moncton, N. B. JAN. 9th. 1907

NOTE: A special train (with Buffet Sleeping Car attached) will leave Truro every Saturday for Sydney and Sydney Mines after arrival of No. 34 (Maritime Express from Montreal. Through dining and parlor cars will be attached to train number 19 leaving Halifax 7.00 o'clock and number 2 leaving Sydney at 7.30 and breakfast, luncheon and supper will be served on trains in both directions.

NOVA SCOTIA.

Mines of Gold, Silver, Coal, - Iron, Copper, Lead, Etc.

Titles direct from the Crown——— ——— At Moderate Royalties.

GOLD AND SILVER.

Licenses are issued for prospecting for Gold and Silver for a term of twelve months They Comprise areas 150 by 250 feet, and any number can be obtained, at a cost of 50 cents per area. Leases of any number of areas can be obtained, at a cost of $2,00 per area, for a term of 40 years; subject to an annual rental of 50 cents per area.

Licenses are issued to quartz mills, which make returns and pay royalty on the gold at the rate of two per cent, on milled Gold, valued at $19.00 per oz.

Minerals other than ——— Gold and Silver.

—LICENSES TO SEARCH—

over five square miles for eighteen months, cost $30,00; leases for four renewable terms of twenty years each can be selected from them at a cost of $50,00, and are subject to an annual rental of $30,00

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

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

FOR INFORMATION APPLY TO——

HON. W. T. PIPES,

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

Experiments show that in an ordinary Davy safety lamp the flame of the lamp will pass through the gauze when the air is travelling 300 feet per minute. The Clanny lamp is likewise unsafe when the current travels 480 feet per minute. With either of these lamps it is seldom possible to detcet less than 2 per cent. of gas in the mine air.—Science and Art of mining.

Titanium in steel is very rarely met with, it is doubtful if any firm at the present time makes a steel of this character. Titanium is one of the most difficult metals to deal with on account of its high melting point. It occurs in many makes of pig iron, but its practical value in connection with steel has yet to be found.—S. A. of Mining.

The....
MARITIME MINING RECORD

Vol. 9, No. 16. Stellarton, N. S., February 27 1907. New Series

PROVINCIAL EXAMINATIONS, 1906:

MECHANICS.—MANAGERS.

Ques. 1.—Area of Piston equals 260 Square inches; work performed in one stroke equals 31,200 foot pounds; length of stroke 3 feet. Find mean pressure of steam acting on the Piston per square inch of area.

Ans. 1—Area of piston = 260 sq. inches.

P eq. $\frac{U}{a\ l}$ eq. $\frac{31200}{260 \times 3}$ eq. 40 lbs. pressure per sq. inch.

Ques 2.—A mine is arranged with three shafts, which are respectively 50, 60, and 70 fathoms deep. Water is pumped from these levels, viz., from the first 20 cubic feet, from the second 30 cubic feet, and from the third 50 cubic feet per minute. Find the H. P. of engine that would be requisite.

Ans. 2—I would have all the water led into the deep shaft and pumped from there with one engine. Therefore we have 20 + 30 + 50 = 100 cubic ft. to be pumped. 100 x 62.5 = 6250, Taking deepest shaft we have 70 x 6 = 420 feet. 420 x 6250 = 2625000.

Allow ¼ for slip of pump = 3281250. Allow ½ more for friction of machinery, etc., we have 4921875 ÷ 33000 = 149 H. P.

Ques. 3—A sinking pit is 100 fathoms deep, and the average diameter is 15 feet, The water is standing 60 fathoms up the shafts ; feeders are 212 gallons per minute. In how many hours and minutes can the pit be pumped dry with a 14" set stroke 8 feet, and making 7 strokes per minute,

Ans. 3—15x15x.7854x60x6x6.25 = 397608.85 gallons of water in shaft.

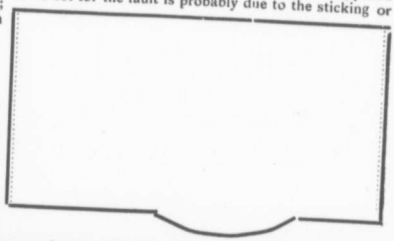
14x14x.034 = 373,184 gallons lifted by pump per minute. Then 373.184 − 212 = 161.184 gallons gained by pump per minute.

Therefore $\frac{397608.75}{161.184 \times 60}$ = 41 hrs. 6 min. 48sec

Ques. 4—Explain and show by a sketch the effect of over-heating the plates of a boiler ; also enumerate the principal causes of Boiler explosions.

Ans. 4—Over-heating may be caused by low water or by incrustation. When the plate is covered with a heavy scale the heat is not carried away by the water fast enough to prevent a rise of temperature, The plate becomes red hot and soft and yields to the steam pressure, forming a pocket as shown in sketch.

A boiler explosion can be caused only by over pressure of steam, either the boiler is not strong enough to carry its ordinary working pressure or else for some reason the pressure has been allowed to rise above the usual point. In the first case the boiler may be too weak for the working pressure because: (1) It is poorly designed ; (2) The material or workmanship may be poor; (3) The boiler becomes weakened by corrosion; (4) The boiler may have been weakened by reckless management, such as letting cold water come in contact with hot plates or blowing the boiler off hot and then quickly filling it with cold water. When the pressure rises above the usual point that the safety valve is supposed to be set for the fault is probably due to the sticking or



overweighing of the safety valve. Some very disastrous explosions have been caused by closing a stop-valve between the safety valve and boiler while cleaning the latter and then forgetting to open it again. It cannot be urged too strongly that a stop-valve should never be placed between the safety valve and boiler. Low water may cause explosions in internally fired boilers but will rarely cause externally fired boilers to explode.

Ques. 5—What Horse Power will be required to haul up a slope 600 yards long, dipping 6" per yard, 800 tons of coal in 9 hours, making proper allowance for the friction of the machinery, the friction of cars being 1-60. Cars to contain one ton of coal ; empty car weighing ½ ton. Give description of engine ; size of cylinders ; length of stroke ; steam pressure per sq. inch. Allow ⅓ of time for changing at top and bottom,

Ans. 5—We will first find the force in pounds to haul 1 ton up the incline. Thus 2240 x 6 ÷ 36 = 373 lbs. due to gravity. Total weight of coal and cars eq. 800 + 400 eq. 1200 tons. ∴ 1200 x 373 eq. 447600 lbs. Add 1-60 for friction of cars we have 447600 ÷ 60 eq. 7460 + 447600 eq. 455060 lbs. Total time in minutes eq 60 x 9 eq 540 minutes. 540 ÷ 3 eq 180, total time for changing. 540 − 180 eq. 360, actual time of hoisting. Taking the modulus of engine as .7 we have

H. P. eq. $\frac{455060 \times 600 \times 3}{360 \times 33000 \times .7}$ eq. 98.5, or say an engine of 100 H. P. To get the size of engine I will use formula

$\sqrt[3]{\frac{100 \times 126050}{40 \times 30 \times 2}}$ eq. 17.3 or say 18 inches.

Diameter of piston 18 inches. Length of stroke 36 inches, connecting 3 times length of stroke or 9 foot crank would be half the length of stroke or 18 inches.

Ques. 6—Give a clear description of the working of steam engines (1) The high pressure or non-condensing engine. (2) The low pressure or condensing en-

gine. (3) The compound engine—and give your opinion as to the relative economy and practical applicability of each of the three classes.

Ans. 6—The high pressure or non-condensing engine is that type of engine that takes its steam at a high boiler pressure and exhausts it into the atmosphere. They are the most simplest type of engine of all the form of steam engines now in use. They are generally of the common slide valve type. Steam enters the cylinder at boiler pressure and follows the piston about half the stroke and is then cut off, after which expansion takes place and forces the piston the remainder of stroke. They are the cheapest type of engine in the first cost and take up very small floor space for their Horse Power. They are not economical on steam and where fuel is scarce and expensive they are not commendable.

The low pressure or condensing engine.—The steam enters the cylinder at a very low pressure, consequently they require a very large cumbersome cylinder. They are worked with a condenser and vacuum pump which causes the engine to exhaust into a vacuum which gives them the benefit of the atmospheric pressure behind the cylinder. They were the first type of engine made and are not in very much demand at the present time as they are cumbersome and take up too much floor space for their Horse Power and they are also an expensive engine.

The compound engine is a combination of the high and low pressure engines. They have a high and low pressure cylinder which can be either tandem or compound. Steam enters the high pressure cylinder at high boiler pressure and performs its work there in the same way as in the high pressure engine, but instead of exhausting into the atmosphere the steam leaves the high pressure cylinder into a receiver, then the low pressure cylinder takes it from there and uses up the rest of energy stored up in the steam and if there is a condenser or vacuum pump it is still better. It is a very economical engine on steam and if cross compound is very steady running.

Ques. 7—How many Horse Power would be required to raise 3800 cubic feet of water per hour from a mine 1000 feet deep? Calculate size of engine and pump suitable for doing this work, allowing one-fourth for slip of pump.

Ans 7—3800 ÷ 60 eq. 63.33 cubic ft. nearly per min. 63.33 x 62.5 eq. 3958.125 x 1000 eq. 3958125 add ¼ for slip of pump we have 4947656.250.

Then add ½ for friction on engine, etc., we will then have 7421484.375 units ÷ 33100 eq. 224.89 Horse Power. Using formula D eq. $\sqrt[3]{\frac{F}{.00545 \times L, N}} = \frac{63.33}{.06545 \times 3043}$

eq. 8.773 or say 10 inches.

To get the total pressure on water end we have $9.973^2 \times .7854$ eq. 75.014 x 1000 x .43 ex. 32256.02 add ½ for friction we have 48384.030 lbs., total pressure of pump. Taking an effective steam pressure of 40 lbs. Then 48384.03 ÷ 40 eq. 1209.6 area of steam cylinder. Then $\sqrt[2]{\frac{1209.6}{.7854}}$ eq 39.2 inches.

Size of pump will be 10 inches; Length of stroke 3 feet; Strokes per minute, 30; Size of steam cylinder 40 inches.

Volcanoes are manifestations of the earth's internal heat. They have existed at all times, and may be seen in every stage of decay. In some cases only portions of their lava beds remain.

A SHORT CUT TO GEORGIAN BAY.

There is a fair prospect of the contemplated electric line between Montreal and Midland soon being materialized. This matter took Sir Adolphe Caron and Senator Domville to England this past summer, where they found the British capitalists favorably disposed in regard to the scheme. As matters are going now, Ontario will soon be a net work of electric wires—there are so many new lines building, notably, the Windsor-Chatham and St Mary's Embro. Then there is the huge new plant of The Ontario Power Co. at Niagara, whose new steel tower lines are a new feature in the landscape in the vicinity of Niagara. The additions now being made by The Canadian Westinghouse Company will make The Ontario Power Company's generating plant the most extensive in the country. If this Montreal-Midland line goes through, a quick means of transportation will be given the wheat of the West. It will mean a complete revolution in the shipping of this greatest of Canadian exports.

To prove the minerals on Balbirnie and Wemyss estate, a deep bore is in progress at Blackbridge, on the Orr, between Thornton and Cameron Bridge, Scotland. For all practical purposes so far as mining science and resources of this generation go, the bore has long ceased to be of any value to Wemyss estate. The dip of the minerals means that a seam found at 300 fathoms at the Orr might be 400 or 500 a mile south. It will, however, form a valuable proof of the workable minerals on Balbirnie. To-day the bore is 580 fathoms. The deepest shaft in Fife, the Mary pit at Lochore, is 331 fathoms, and much beyond that modern engineers would not care to ask any company to launch the capital necessary to sink the shaft.

On the 28th ult., the miners engaged at Lord Dudley's Baggeridge Wood sinkings, on the fringe of the Black Country, near Wolverhampton, struck a somewhat flattened seam of the famous "ten yard coal" of South Staffordshire, at a depth of 556 yards. The seam is 20 feet thick, of superior quality, and inexhaustible for many years to come. Sinking operations have extended over a period of nearly ten years; thousands of pounds have been spent. The discovery has verified the predictions of Professor Lapworth and other eminent geologists respecting the existence of coal measures under the sandstone of the South Staffordshire coal field. Machinery embracing every modern improvement is to be installed. When the colliery is in full working order a daily output of two to three thousand tons is anticipated. Whilst sinking, miners also discovered valuable deposits of iron ore, equal to the best Cumberland hematite. The two discoveries will restore the commercial prosperity of South Staffordshire and East Worcestershire to the degree enjoyed in the early seventies.

AHEAD OF NOVA SCOTIA.

The investigations of the police, following on the discovery of extensive gold stealing in Western Australia, have revealed a far reaching system of audacious robbery. The losses of the Golden Mile have probably reached a million a year, but the thieves will have to adopt new methods if they want to continue their profitable trade. Gold is now unsaleable in Western Austral-

ia except through recognized channels. The detective who stopped the robberies in Kalgoorlie has been conducting investigations in the Eastern States, and told a Melbourne reporter that he was himself astounded at the magnitude of the gold thefts, and that he was still being met with some fresh and astonishing facts concerning them. There was one instance he mentioned of a quantity of seven tons of concentrates that had been illicitly obtained, and which had been dealt with by the buyer, who roughly extracted a very big profit from them, and then sent them to smelting works in the Eastern States, where they yielded £40,000 worth of gold. The detective found that Western Australia gold was reaching Victoria in considerable amounts. In Bendigo, he stated, he found that one gold buyer had bought during the last three years about 2,330 oz. that was set down as coming from Western Australia. "Of course" he said, "this gold may have been honestly obtained, but it seems extraordinary that those who sold it should have come past the banks and mints in Perth and Melbourne in order to sell it to some comparitively obscure buyer in Bendigo. The number of gold buyers in Bendigo struck Detective Kavanagh as being unusually large. He found that in some cases sellers of gold had sold in the first place to small buyers, who had in turn sold to larger buyers, and the larger buyers had in their turn sold to the mint of the banks. As it was open to those who had gold to sell it direct to the mint of the banks, and save middlemen's profits, this state of affairs was certainly somewhat remarkable. Western Australia has an "undesirables" law, by which the police have been able to drive practically all the notoriously bad characters out of the State, and it is confidently expected that in future its crime record will be the lowest in Australia.

An ingenious application of the microphone for the detection of fire-damp has, according to Professor Gisbert Kapp, been made in France by Hardy. If the sound waves of two pipes of equal pitch impinge on microphones connected in series with a telephone, a clear note is heard, but if one of the pipes emits a but slightly different note, there will be beats heard in the telephone. Now if one pipe is on the bank and the other underground, the latter, if there be fire-damp, will be blown with air of a different density and emit a different note. The telephone by sounding beats, will then give warning of the presence of fire-damp. The apparatus when tested with coal gas, showed great sensitiveness. An admixture of but 0 1 per cent. gave three beats in twenty seconds, and an admixture of 1 per cent. gave thirty beats in twenty seconds.

ELECTRICAL EXHIBITION IN FRANCE.

There is shortly to be held in Lyons an exhibition of the many new electrical devices invented for domestic uses. No motor will be shown exceeding one horse-power. There will be motors for embroidering, for sewing and knitting machines, ventilators, vacuum carpet and rug cleaners; also machines for house-cleaning and floor polishing, and small electric run carts and electrical arrangements for turning spits in cooking.

It will prove the practical uses to which electric power is being put abroad. When adopted, the housewife will find her work a simple matter of attaching a wire to an incandescent light and turning on the key—and her dressmaking bills will be reduced by the simplicity of the electric motor. All through the day, electricity will be saving her time, trouble and money.

Some of the extraordinary smaller uses of electricity can be observed in the skyscraping Traders' Bank Building, in Toronto. Wherever one turns there is something that makes things easier in the way of electricity. From the electric elevator to the electric mail-shute, the up-to-date application of this mysterious power is encountered on every hand. In giving the contract, The Canadian Westinghouse Company, which was selected to supply the electric apparatus, was instructed to give full attention to these convenient and step-saving details.

SECRETS WORTH MILLIONS.

The inventor of eau de Cologne was an Italian, Giovanni Farina. Farina offered vainly to sell his recipe for $3,750 in 1803, but a few years ago it was sold by his heirs for $200,000. Chartreuse, the liquer of the Carthusian monks, was the invention of an aged baker. On the expulsion of the Carthusian fathers from France the Chartreuse recipe was sold at auction for $1,750,000. The French buyers, however, undertook a losing business, for the monks are now making their liquer in Spain, and epicures prefer it to that of the French firm. The thin paper on which the Oxford Bible is printed is made after a secret process by the Oxford University Press. The secret is valued at $1,250,000. Absinthe's secret once belonged to a French chemist. He sold it to a distiller for $75. The distiller sold it for $50,000. It is now not worth its original $75, having leaked out.

NOVA SCOTIA STEEL AND COAL COMPANY

The directors of the Nova Scotia Steel and Coal Co. who met last week have decided to once more place the company on a dividend basis. The directors declared a quarterly dividend on the common stock of 1 1-2 per cent. for the first three months of 1907. This is payable on April 15th. The statement for the year shows the net profits to have been $960.000 as compared with $559,000 for 1905.

The report of the directors to the stockholders, which is signed by the president, Mr. Robert E. Harris, is as follows;

Your directors submit herewith their sixth annual report, with statement of assets and liabilities, and abstract of profit and loss account for the year ended December 31st. 1906.

The total volume of business transacted by the company during the past year was considerably larger than that of any previous year, although, owing to the blast furnace at Sydney Mines being out for relining during the months of November and December, the output of pig iron was not very much greater than during the former year. The sales for the year increased $956.900 over the preceeding year.

From our steel department we shipped 42,831 tons of finished material, being an increase of practically 50 per cent. over 1905.

The quantity of pig iron sold, however, was very much smaller than the previous year, 16,872 tons, as against 28,723 tons during 1905, due part-

ly to the fact that a larger proportion of the output of the blast furnace was made into steel, and partly to the furnace being out of blast during November and December.

On December 31st. we had orders on our books for 22,000 tons of steel at better prices than prevailed during 1906.

The quantity of coal mined exceeded that of the previous year by 126,172 tons, the company still being the second largest producer in Nova Scotia,

Early in the year we began the driving of submarine slopes for the purpose of reaching and opening up our sea areas at Wabana. Good progress has been made with this work, and the results obtained strengthen the belief of your directors that these sub-marine areas may prove to be a valuable asset of the company.

Your directors are pleased to report that the profits for the year 1906 were $960,281,03 as compared with $559,906,63 for the preceding year,

The amount to the credit of profit and loss account on January 1st. 1906, was $795,325,03, which with the profits of the year, make a total of $1,755,606.06 to the credit of this account on Dec. 31st. 1906.

The regular dividend of 8 per cent. on the preferred shares has been paid quarterly.

The sum of $101,878,75 has been transferred to the credit of the special reserve fund—of which $75,000 is for general depreciation and renewals, $12,378,75 for blast furnace renewals being 25 cts. per ton on the output of pig iron during the year, and $14,500 for depreciation of the shipping property owned by the company.

During the year this reserve fund was charged with the sum of $29,215,28, being the amount expended in relining the blast furnace, and the further sum of $50,000 was charged against this account to provide against loss which the company may make in connection with its railway to Sunny Brae.

The amount to the credit of this fund is now $650.989,51 as compared with $628,326,04 at the beginning of the year.

The balance carried forward to the credit of profit and loss on the 1st. of January, 1907, is $1,180,783,89 as against $795,325,03 on the 1st. Jan. '06.

The sum expended on capital account in plant and improvements, in acquiring iron ore areas, submarine coal areas, and real estate at Montreal and elsewhere, amounts to $199,256,10.

Your directors have aimed to place the company in a strong financial position before resuming payments of dividends on the common stock. They have also thought it desirable before resuming these dividends, that that there should be a reasonable certainty of their continuance under normal business conditions. While the profits for the past year, and the amount now at the credit of the profit and loss account seem to warrant the payment of a dividend for the past year, the directors believe that the interests of the shareholders will be best served by passing it. They have declared a quarterly dividend of 1 1-2 per cent. for the first three months of the year 1907, payable April 15th. to shareholders of record on March 31st. 1907.

AMENDMENT TO MINES ACT.

The following is a copy of the bill introduced by Hon. Mr. Pipes to amend the Mines Act, and an 'Act' respecting certain coal leases. The important part of the Act begins with Section number 2, and its object is clear:

1. Section 201 of Chapter 18 of the Revised Statutes, 1900, is hereby repealed and the following substituted therefor:—

(1) Every lessee, upon application to the commissioner not later than thirty days after the expiration of the lease held by him, shall be entitled to a renewal thereof for a further period of twenty years from such expiration.

(2) Such lessee, upon application to the commissioner not later than thirty days after the expiration of such further period of twenty years, shall be entitled to a renewal of such lease for a still further period of twenty years from such expiration.

(3) In like manner such lessee, upon application to the commissioner not later than thirty days after the expiration of such further period of twenty years shall be entitled to a renewal of such lease for a further period of twenty years from such expiration; but in no case shall such renewals of any such lease extend the term of the same beyond eighty years from the original date of the lease.

(4) Every such renewal shall be upon the same terms, covenants, and conditions as are contained in such lease, subject, however, to the addition of substitution of any other terms, covenants and conditions which may be inserted in a lease issued under this chapter by virtue of the provisions of this chapter or of any other statute hereafter passed.

(5) In any such renewal the rent payable by such lessee may be increased.

(6) In the case of any lease which has expired or has been forfeited for non-payment of rental, or for any other cause is liable to forfeiture, the Governor-in-Council may, notwithstanding any application made for the tract of ground covered or formerly covered by such lease, or any part thereof, authorize the commissioner to renew sueh lease upon such terms and conditions as the Governor-in-Council sees fit to impose.

2. The following renewals of leases, that is to say:—

(a) Renewal of lease, number 9/22, held by the Styles Coal Mining Co. of an area in the County of Cumberland, dated 25th. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Register Book No. 2, page 8;

(b) Renewal of lease, number 10/23, held by the Styles Coal Mining Company, of an area in the County of Cumberland, dated 23 August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Register Book No. 2, page 9;

(c) Renewal of lease, number 11/28, held by the Styles Coal Mining Co., of an area in the County of Cumberland, dated 23rd. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Register Book No. 2, page 10;

(d) Renewal of lease, number 12/29, held by

(Continued on Page 19)

Rubs by Rambler.

JUST what the government is going to do, in the matter of technical education, is not definitely known. For certain there will be one big school, or college, in Halifax, as the place most accessible and convenient, and a half dozen minor schools in various parts of the province. Indeed if the scheme is to be as general as it is hinted it will be, there will require to be, at least, a dozen of the "country" schools. In season and out of season our friend of the Suburban insisted upon the government appointing a commission to find out what had been done in the direction of technical schools, in all parts of the world. Before the Mining Society he declared that without a commission no proper system could be established. Some of us said we would be content with small things for a beginning, but not so our friend. With him it was a whole loaf or no bread. The RECORD for years has called for an improved system of instruction, asking that a beginning, if a humble one, be made. The government is going on with a technical college, and is doing so without having appointed any commission, like the one suggested. The government has had advisors, some of them with knowledge and others who may know just what is wanted, though no one, unless told, would suspect it. It is pleasing to know that our friend of the Suburban has been given an inkling of the bill, and is, if not wholly satisfied, greatly pleased. I am not going to express any opinion on the scheme until I know a good deal more about it. I am afraid the government has not provided a way whereby the poor man's son may be enabled to spend the necessary time in Halifax, after his course in the "primary" schools. This is an important point, and I trust it has not been overlooked.

* * *

WHEN the rage for big outputs and big collieries was at its height, some years ago, the RECORD threw out the hint, in plain language, that big outputs might reach that point when they meant increased cost of production. This view was not generally acquiesced in, and big collieries were still the cry. At the present time, if I mistake not, operators are coming round to the opinion of the RECORD, that the biggest collieries are not the most economical; in other words they are veering round to the opinion that there is a limit in size, beyond which it is not profitable to go. Two collieries of a capacity of five hundred tons each, driven in the same seam, a half mile apart, may not be as profitable as one pit of a thousand tons capacity; but it is a matter of debate whether two one-thousand capacity collieries are not more profitable than one of two thousand tons. As between two collieries of 1,500 to 2,000 tons, and one colliery of double that capacity, the opinion is, it may be said, pronounced, that the two collieries are preferable in all essentials to the one. This is a practical subject, and should engage the attention of mining students; and if the Board of Examiners would condescend to introduce a practical subject or two like this at the examinations, even at the expense of "scientific" questions, they might be acting in the best interests of the trade, and those engaged in its promotion.

* * *

The Odell Club, of Glace Bay, whose chief object is to explode the exploitation, as new, of old discoveries, should take notice that the Mullins seam, often lost, frequently strayed, and innumerable times stolen by amateur prospectors, is no longer a subject of practical debate. In its stead has come the question to be pounded out, namely, "Is the No. 6 slope on the Phelan seam, or is it not?" Those who take the negative exultantly exclaim, "Ask Hugh Fletcher, the best geologist we have among us to-day. Fletcher will not swear that it is the Phelan." Perfectly correct. Hugh is no fool, and has never been known to swear to anything, and it will be hard to break him off the habit at his time of life. Ask Hugh, indeed! The man who does that has an unanswered question for his pains. All the answer he will get from Hugh is that it is a good subject to speculate upon; or that it might be worth while to drain Big Glace Bay Lake and put down a bore hole or two, in an effort to discover the Phelan which took a hop, step or jump, or all together, somewhere between the shores of the lake. If Hugh will not swear that No. 6 is on the Phelan, you may bet five cents that neither will be swear that it isn't.

* * *

SAID Andrew Roy, for many years the well-known Inspector of Mines for the State of Ohio:—"If the laws of the several mining states were enforced and obeyed, there need not be a single explosion." If that be true as applied to the United States, it should also hold good if applied to Nova Scotia, where, if anything, the mining law is in advance of any mining law in any of the States. And if it be true that there need be no explosions, the law being duly acted upon and enforced, then it goes without saying it that in the second largest of the mining states, the law is not being enforced: on the contrary is being woefully neglected, else there would not have been, as of late, three bad explosions in as many weeks. It would be interesting if we could be told, seeing these explosions were preventible, who are responsible for them, the manager or the men? In Nova Scotia we have not had an explosion of any magnitude for years, and we need not have another if masters and men do not fail in taking ordinary precautions. But explosions

are not the only cause of loss of lives in mines. When a big explosion comes, in any country, one may be startled at the great sacrifice of life, and yet if it may be said explosions claim their thousands, it may with equal force be said, "but falls of roof and stone claim their tens of thousands." And yet, though the world over falls are thought to be the cause of the loss of the greatest number of lives of coal miners, it cannot be said that it is true as regards Nova Scotia—at least it has not been the chief contributing cause during the past two or three years. Of late years more loss of life is due to the underground workers being run over by rakes, or crushed between the rake and the rib, than to any other cause; and surely, except in the case of a runaway, even these accidents are preventible. The dangers of the mine are still many, though not so numerous or so much to be dreaded as in former years. A writer in one of the magazines says that asthma is still a deadly miner's disease. That is not so, if said of Nova Scotia miners, and it need not be so if better ventilation is a preventive. Formerly it was the air of the mine that was the inciting cause of asthma; to-day, if a miner falls a victim to the disease the fault is perhaps his own, and not that of the operators. If he persists in running up hills or along levels, or allows himself to rush into draughts when heated, he cannot expect to escape the effects of such action below ground any more than he would above ground.

* * *

How is it that Mr. Tanner cites the case of New Zealand as a reason the government of Nova Scotia should go into the business of coal mining? Mr. Tanner has the idea that by the local government going into coal mining, a supposed monopoly in coal would be broken up. That may be a correct or an erroneous idea, but his position is not fortified by citing New Zealand as a country where government operation of coal mines had the effect of breaking up anything like a "corner" in coal. It is impossible that a monopoly in coal ever could have existed in that country. It cannot well be that a monopoly can exist where there are innumerable competitors. Competitors in coal mining are numerous in New Zealand; indeed perhaps more numerous in comparison with output than in any other country in the world; therefore it could not be with the object of cutting the fangs of a menacing monopoly that New Zealand went into coal mining. Probably its chief object in embarking on the business was to satisfy an unreasoning clamor or restlessness. The Minister of Mines of New Zealand only recently issued his report for 1905. For 1905 the total output of all the New Zealand coal mines was 1,585,000 tons—less than a third of the total output of Nova Scotia. And this comparatively small output was divided among no fewer than a hundred and seventy-seven mines, giving an average output per mine of less than 9,000 tons a year, or less than thirty tons a day. What sort of country, in respect to coal mining, is this to hold up and applaud before Nova Scotians? With about a tenth of the number of mines Nova Scotia produces nearly four times the amount of coal. The only machinery at some of the New Zealand mines must be a miner, a laborer, and a wheelbarrow. Coal mining in New Zealand affects only 3,200 men; here it affects 10,000. In New Zealand, where a paterly-materly government gathers its workpeople, as does a hen its chickens under its wings, one would suppose that few accidents befell those engaged in coal mining. The fact is that a life was lost for each or every 264,000 tons of coal raised, whereas in Nova Scotia we raise more coal with fewer fatal results.

* * *

THE *Suburban* accuses the *Sydney Record* of making the oft-repeated assertion that the price of coal could not be lowered without lowering the rate of wages, and adds:—"The editor of the *Sydney Record* may know more than we do about some things, but we know more than he does about the price of coal and the miners' wages, and that is one point on which we feel safe, when we state that the price of coal to small consumers in Nova Scotia can be considerably lowered without reducing the present rate of wages." It may be a virtue to have an ever-present feeling of cocksureness, but it is one that sometimes places the possessor in a rather ridiculous position. With the *Sydney Record* I say that the price of coal neither to large or small consumers can be reduced without a very appreciable reduction, not only in money rates, but in colliery labor generally. Is the *Suburban* aware that it was a matter of serious discussion a few weeks ago, whether there should be an advance in the price of coal, or a "notice of reduction" of wages? That neither policy was put into play was due solely to the fact that the operators agreed to carry on, for another year, with little or in some cases no profit, rather than cause commotion. The "smaller" consumers of coal are householders. A reduction of 25c. a ton would not appear a big reduction to a majority of them, and yet a reduction of twenty-five cents in price might mean the closing down of a colliery which supplies more house coal than any other. If the editor of the *Suburban* knows about the price of coal and miners' wages, what need is there of a commission? Let him appoint a little commission of his own, and let him be put on oath and make revelations. If his statements are facts, then the matter is settled. The editor of the *Suburban* may know a little about a certain little colliery, and not as much about even that one as he should know, and there his knowledge ends. "But if a commission cannot be obtained to enquire into the price of coal, let one be appointed," cries the *Suburban* editor, "to enquire into the waste that is going on." The first

request is "rich." The second is boundless in its guilelessness. Just fancy a government seconding a resolution, or making any motion which involved a straight vote of censure upon its management of affairs! Our coal mines are under government inspection, and if there is needless waste, then the government is primarily responsible. The question is asked: "Is even ordinary precaution taken to prevent the destruction of our coal mines"? The answer is in the affirmative, emphatically. Not only do the operators in their own interests exercise precaution, but the government, by its inspectors also does. Our inspectors may not all be trained—whatever that may mean—scientific men, but they are men of shrewdness, experience, and, what is of the first importance, common sense, a word which I fear cannot be applied to their critics. "The inspectors in other countries are trained, scientific men." Nonsense; Andrew Roy, the most referred to inspector in the United States, had no technical training, went through no scientific course. Connors, who came from the United States, where he had been a mine inspector, to C. B. some years ago, had no more "training" or "science" than an ordinary, everyday miner. They have trained, scientific men in the States, have they? Well, perhaps that is the reason that in one state, within three weeks, not three months ago they had three explosions, causing fearful loss of life and wreckage of property. In the following paragraph a grave charge is made against the Department of Mines, against Dr. Gilpin the Inspector, and against Nevilles and Nicolson. Cadegan and Cameron, the deputy inspectors. If these gentlemen cannot report to the government. or do not, as to the management of the mines, if they allow violations of the "statute of regulations" without comment, then the sooner they send in their resignations one and all the better.

"It is quite impossible for the government of Nova Scotia to know and, as a matter of fact, they do not know, whether the coal mines are being conducted even according to the rules laid down in the Statute of Regulations."

* * *

THE debate in the local parliament on the speech from the "throne" should prove interesting to Pictonians, particularly from the fact that the three members from that county took part in it. No other county had the distinction of putting forward its full representation to make speeches for or against. There were sentences in each of the three speeches to which an impartial critic might take exception, while in each of the speeches there were paragraphs he might applaud. I think Mr. Tanner is all astray in holding up New Zealand to us as a model country, especially when he hints that our government should take pattern from it and go into coal mining. Perhaps he didn't quite say we should go into coal mining, but that we ought to be in a position to go into it; but are not, owing to, well, say partizanship, and the possible prostitution of the business for party purposes. So far as I understand Mr. Tanner's general coal policy, I do not agree with ti. But away down—if he says that we are not ready for coal mining by government in Nova Scotia, or for that part in Canada—I rather think I must agree with him. When the conservatives were in power the government railway was highly prized by them as a most useful and invaluable tory incubator and nursery, and I am not quite prepared to kiss the book and swear, or hold up my hand and affirm that I believe it serves no such purposes to-day, when the liberals are at the throttle. Mr. Baillie hinted, or to be exact, stated that certain officials of a coal mining company in Pictou were active on behalf of the liberals. That may be true. but there was at least one official who had no spoken words of sympathy for the government candidates. Mr. McGregor said he had yet to learn that certain officials of another company were favorable to the liberals. Well, they were, nevertheless, all but one, who had any influence in the direction of securing votes. Mr. McGregor retorted to Mr. Baillie's remarks that if the mining officials lent their influence to the liberals, clerical influence was against them, and further said that some clergymen had hurt themselves by this display of partiality, not to say partizanship. I have heard it said, in reference to one clergyman, that he preached a partizan sermon. Well, I heard one discourse said to be of that character, but I must confess that I could not say it was, for the reason that he praised the liberal leader at Ottawa more than he censured, if he censured at all, the liberal party in the province. Only extreme partizans could say the clergyman went out of the way. There are some who think that clergymen should never talk on a political question. I do not agree at all with such a sentiment. The education question is an intensely political one in Britain at the present time, and the clerygemen who have not made vehement references to it from their pulpits are the exceptions, not the rule. Temperance may be at times a political question, and if a clergyman holds it to be of paramount importance. a question overshadowing all others, why should his mouth be closed? He may not be accused on the ground that his sympathizers go with a party that at heart is dishonest on the question. The point is. does he conscienciously believe it to be sincere? For my own part I do not believe that, to-day, the influence of the parson in matters political, counts for much. I have been going to church now for a good long while, and I cannot point to one single individual who deserted his party at the bidding or the request of his minister. On moral questions clergymen surely have a right to express publicly their views.

WILL some one kindly explain how it is that bank cheques read "Pay to —— or bearer," etc. In my experience, and so far as my observation goes, more checks when written have the word "bearer" erased and the word "order" substituted in writing in its place. Why is the word "order" ont printed, seeing it is used so much more frequently than "bearer"? I have asked a couple of tellers for an explanation, but they could give none. There must surely be some reason.

* * *

HARKING back to Mr. Carruthers' assertion that the working men of the day were becoming more and more socialistic in their views; that the general name of that which they are contending for is socialism, I am glad to be able to support the position that I took last issue, namely that trades unionism and socialism are not one and the same thing, by what transpired at the conference of the National Labor party held recently in Belfast. There, Mr. Keir Hardie, who is the leader of the Socialist group in parliament, met with a rebuff. A resolution brought forward at the conference declaring the ultimate object of the Labor party to be "the overthrow of the present competitive system of capitalism and the institution of a system of public ownership and control of all the means of life," was stoutly opposed as exluding from delegateship and parliamentary candidature all who were not socialists. This resolution was defeated by 835,000 votes against 98,000. Another resolution whose, unclothed, aim was to make the Labor party a Socialist party in the House of Commons was thrown out by a vote of over a million against 76,000. A resolution supported by Keir Hardie, asking for adult suffrage, and equal privileges to both sexes, and immediate women suffrage, was defeated by a mild and pious amendment, which declared that the time had come when equal suffrage should be extended to all men and women. From what transpired at the conference it is evident that socialism is making little more progress in Britain than it is doing in Germany or in France. In France, the Socialist leader, Faures, was snubbed by the premier, who said he would go on with reforms, but would set his face against collectivism, and that is the position of John Burns and other great labor leaders.

AROUND THE COLLIERIES

NORTH and south landings have been started off in Dominion No. 1.

PUMPING by machinery, whatever its final results, is not a slow process by any means.

ELECTRIC hoists are being operated in the water shaft at International.

A WORKMAN named Gouthro fell down the water shaft at International. No one noticed his fall. Only after he was missed was search made and his body found in the shaft bottom broken and bruised. There was much water at the bottom.

THERE was a little quiet excitement among the employees of the third seam slope at Stellarton last week, caused by signs of fire and damp in one of the balances. After considerable exertion, cause of alarm was removed. The fire had an effect on the output for a couple of days.

EVERYTHING is now working satisfactorily at Springhill, and all fear of damp or fire has been removed from the minds of the workers underground. The section built off will not prove a serious loss, as the coal in it was slightly disturbed and yielded an undue proportion of slack coal.

MR. Deppe, Vice-President of the Mabou and Gulf Coal Company, reached Mabou beginning of last week. The men were paid in full for January. It is likely that the work of extending and straightening the slopes will be immediately proceeded with, and also the piercing of the fault, which interrupted the progress of the east levels. There will be no big extensions or improvements on the surface this season, the company adopting the wiser course of devoting its chief attention to the prosecution of development work underground.

THE following have been appointed instructors in the Mining Schools in the respective districts:—

Cumberland County—James Scott, Springhill; Sydney Green, Joggins, and Thomas Carr, Ghignecto.

Pictou County—Samuel Moss, Westville; A. Macdonald, Stellarton; H. H. Cameron, Thorburn, and John D. McKay, Coalburn.

Inverness County.—John Gray, Port Hood; Angus R. McIsaac, Inverness, and Jas. S. Quigley, Mabou.

Cape Breton County.—James Connors, Reserve; John A. Macdonald, McKay's Corner; John C. Nicolson, Dominion No. 1; R. B. Crosby, Bridgeport; Sol. Dewfall, Sydney No. 3; Nov. Macdonald, Dominion No. 4; James McCuish, Dominion No. 6; R. D. Anderson, Glace Bay; D. L. McKay, Hub Colliery, and Absalom Beaton, New Aberdeen.

(Continued from Page 14.)

the Styles Coal Mining Co , of an area in the County of Cumberland, dated 23rd. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Register Book No. 2, page 11;

(e) Renewal of lease, number 13/30, held by the Styles Coal Mining Co'y, of an area in the County of Cumberland, dated 23rd. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Book No. 2, page 12;

(f) Renewal of lease, number 26/16, held by the Minudie Coal Co'y., Limited, of an area in the County of Cumberland, dated 25th. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Book No. 2, page 60;

(g) Renewal of lease, number 1/13, held by the Port Hood Coal Co'y. Limited, of an area in the County of Inverness, dated 25th August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Book No. 2, page 31;

(h) Renewal of lease, number 6/4, held by the Port Hood Coal Co'y., Limited, of an area in the County of Inverness, dated the 25th. August, 1886, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Book No. 2, page 46;

(i) Renewal of lease number 7/10, held by the Port Hood Coal Co'y., Limited, of an area in the County of Inverness, and registered in the office of the Commissioner of Public Works and Mines, at Halifax, in Coal Lease Book No. 2, page 47;

shall be and the same are hereby continued in force for one year from the dates upon which the same respectively expired; and the Governor-in-Council may at any time during the period for which said leases are so extended, notwithstanding any application made for the tracts of land covered or formerly covered by said leases, or any part thereof, authorize the commissioner to renew such leases, or any of them, upon such terms and conditions as the Governor-in-Council sees fit to impose, without notice to the commissioner, notwithstanding any provision of said leases respectively, or of any statute of the province to the contrary.

SIPHONS.

Q.—Explain action of siphon, and the law which governs its working.

A,—A siphon is a length of pipe bent in the form of a letter U. It is used extensively in mining operations to drain water from dip workings into lodge rooms which are on a lower level than that of the suction end of the pipes.

The siphon will not in any case raise water from a level which is lower to a higher level, but drains the water over a brow from a point to another point which is lower. To obtain the best results from a siphon it is essential that the pipes should be laid as straight as possible and all joints made water and air-tight; also the delivery leg longer than the suction leg, or, in other words, the water should have more distance to fall than to be lifted.

In theory the siphon should lift water up to a vertical height of 34 feet, but in practice if we secure a lift of 24 feet we are well satisfied. To start the siphon to drain water, all the air must be extracted from the pipes. This is done by having taps fixed on the length of pipes, one on the bend and the other on the delivery leg; then ready to start the tap on the bend is opened, thus allowing the air to escape. At the same time the pressure of the atmosphere forces the water up the suction leg of the siphon; when the water reaches the highest point on the bend, that tap or valve is closed, and the valve on the delivery leg is opened and the air escapes, and water drains out in a continuous flow. In no case should the suction pipe be allowed clear of the water to the atmosphere. Water should always be allowed to cover it, so that no air is allowed to draw into the pipes to cause an erratic action, or perhaps to stop the siphon altogether, causing serious delay. Sometimes a small hand pump is employed when the siphon is restarted to fill the pipes with water before the delivery valve is opened.

A siphon is one of the cheapest forms of appliance used in mines, where conditions are suitable for its adoption to drain water, as no power is required, and when properly arranged it needs very little attention, and will draw a large quantity of water many hundreds of yards. A siphon has been known to convey water fully 240 yards with a lift of 240 feet, and a delivery of about 40 feet.

Spain is justly celebrated for its mineral wealth It produces more cupreous pyrites than any other country in the world, and very large amounts of lead ore and quicksilver; its iron ores are abundant and of excellent quality, and it has of recent years become an important supplier of manganese ores.

The production of lead in Canada for the year 1906 amounted to 26,000 tons. The production for 1905 was 27,000 tons. The record year was 1900, when a total of 30,000 was reached.

The Malay Peninsula is the great tin producing region of the world at the present day, and the States with the largest output are under British protection. The ore is obtained almost exclusively from alluvial deposits, worked partly by the open quarry method and partly by true underground mining.

Work has not yet been resumed at the Fundy Mine. There are a few men employed in making repairs around the bank head building, but the great majority of miners have left the place and secured employment at other mining centres. The management have made no pronouncement with regard to the course that they intend to pursue.—Hx. Chronicle.

The coaling record at Portsmouth has again been broken, the "Goliath" battleship, of the Channel Fleet, having taken on board 1,630 tons in five hours, eighteen minutes, coaling from the floating depot. The former highest record was that of the "Mars" battleship, with 1,240 tons in four hours, five minutes.—Science and Art of Mining.

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

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

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

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

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

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

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

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

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

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

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

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

SYNOPSIS OF CANADIAN NORTH-WEST MINING REGULATIONS.

COAL. Coal lands may be purchased at $10 per acre for soft coal and $20 for anthracite. Not more than 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.

INVERNESS RY. & COAL CO'Y

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

EASTBOUND Read Down		STATIONS.	WESTBOUND Read Up	
No. 52 a. m	No. 54 p. m			No. 53 p. m
L 11 10	L 3 55	P. TUPPER JUNCTION	A 11 00	A 3 25
S 11 16	S 4 05	PORT HAWKESBURY	S 10 55	S 3 27
A 11 35	A 4 13		L 10 42	L 3 10
	L 4 18	PORT HASTINGS	A 10 37	
	F 4 30	TROY	F 10 27	
	S 4 43	CREIGNISH	S 10 15	
	F 4 55	JUDIQUE	F 10 06	
	5 10	CRAIGMORE	S 9 42	
	F 5 22	CATHERINE'S POND	F 9 29	
	A 5 38		L 9 15	
	L 5 43	PORT HOOD	A 9 10	
	S 5 58	GLENCOE	S 8 55	
	S 6 21	MABOU	S 8 25	
	S 6 23	GLENDYRE	S 8 15	
	S 6 53	BLACK RIVER	F 8 00	
	S 7 07	STRATHLORNE	S 7 47	
	A 7 20	INVERNESS	L 7 30	
	p m		a m	

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

In order to serve its customers in Alabama to the best possible advantage, the Sullivan Machinery Company will establish a Branch Office and Warehouse at number Twelve South Twentieth Street, Birmingham.

The United States exported to Canada last year 2,176,000 tons of Anthracite and no fewer than 5,357,000 tons of bituminous. The increased exports of bituminous to Canada were 100,000 tons in excess of the increase in production 1906 over 1905 of the Nova Scotia mines. The imports of bituminous coal from the States exceed the total production of Nova Scotia coal.

Dominion Coal Company, Ltd.

Miners of

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

——Yearly output 3,500,000 tons.——

ANALYSES.

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

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

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

Shipping facilities at Sydney, and Louisburg, 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.

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

DOMINION COAL COMPANY, LIMITED, 112 St. James St., Montreal, Que.
DOMINION COAL COMPANY, LIMITED, 171 Lower Water St., Halifax, N. S.
DOMINION COAL COMPANY, LIMITED, Quebec, Que,

—and from the following agents.—

R. P. and W. F. Starr, St. John, N. B.
Harvey & Co., St. Johns, Newfoundland.
Hull Blyth & Co., 4 Fenchurch Avenue, London, E. C.
Peake Bros. & Co. Charlottetown, P.E.I.
A. Johnston, and Co., Stockholm, Sweden.

G. H. DUGGAN,——2nd. Vice President

CUMBERLAND RAILWAY AND COAL COMPANY.

OPERATING THREE THICK SEAMS NOS 1, 2 AND 3.

—Miners and Shippers of the Well Known—

FRESH MINED SPRINGHILL COAL

. . . ANALYSIS . . .

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

BEST COAL FOR LOCOMOTIVE USE.

Delivered By Rail or Water

BEST COAL FOR GENERAL STEAM PURPOSES.

The year Round

IN Lots To Suit Purchasers.

BEST COAL FOR DOMESTIC CONSUMPTION.

BEST GAS COAL

Mined in the Province.

Head Office

MONTREAL

Mines

SPRINGHILL

N. S.