

MARITIME MINING RECORD

Dr. R. Bell
Geol. survey dept.

COAL AND METAL TRADES JOURNAL

Cumberland. * Pictou. * Cape Breton. * Inverness

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January 25th. 1905

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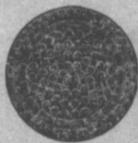
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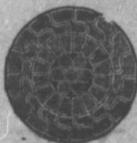
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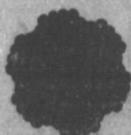
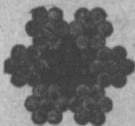
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62 Mixed from Mulgrave	8.10
37 Mixed from Pictou	10.44
19 Express from Halifax and St. John	11.50
142 Mixed from Pictou	14.55
50 Express from Sydney	14.55
50 Express from Montreal and Halifax	15.50
101 Mixed from Pictou Landing	16.10
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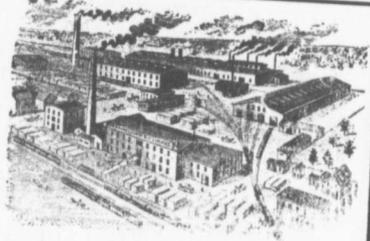
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The...
MARITIME MINING RECORD

Vol. 7, No. 14. Stellarton, N. S., JAN. 25th, 1905

New Series

Selected Questions and Answers.

SAFETY LAMPS.

Q.—Describe some suitable means of locking a safety lamp.

A.—It should be so arranged that it cannot be undone, except by the proper official by the means he is empowered to use, and at the same time he should be able to detect any signs of tampering with the lamp. There have been many clever devices brought out to fulfil this purpose.

The older lamps having a locking arrangement in which, when the vessel of the lamp is screwed into the lamp, a small screw is turned until it so tightens itself on the vessel that it cannot be undone without the screw being released.

There is a fault about this, that is, in time the screw cuts into the vessel of the lamp, and makes a hole in it by frequent screwing up.

Another means of locking is by aid of lead rivets being passed through a hole to prevent the lamp being undone, (the system that is in vogue at the Springhill collieries.) I will later explain this.

Amongst the more recent patents is one which is pneumatically locked, and cannot be undone without the machine as in the Cambrian lamp.

There are also the lamps which, when unlocked, or rather when attempting to turn the screw to undo the lamp it engages a prickler which draws the flame down and extinguishes the flames when the screw is turned. Thus, before the lamp can be really undone the light has been put out. At the present time, however, we know that we must pay for new ideas, and at the same time we have to use strict economy.

Therefore the one I should adopt would be the means of locking by lead rivets.

It is generally known that the vessel is screwed into the frame of the lamp, and the lamp is locked by the aid of some other arrangement when the vessel is screwed home.

In the arrangement I wish to describe, an eye-piece is brazed on to the vessel, and on the frame another hinged eye-piece is so placed as to fold over the eye-piece on the vessel, when the vessel is screwed up. It resembles very much the fastening of a powder canister, or old fashioned tin trunk.

When the hinged eye-piece is folded over, the eye-piece on the vessel is ready to receive a pad-lock, or in this case a lead rivet.

This lead rivet must be made and riveted in such a manner that it will show any signs of tampering, and to produce this means on one side a

properly rounded head is formed as in the ordinary rivet, and when the other end is required to be secured it is done by means of a pair of pliers.

To detect this tampering a monogram is generally raised on one side of the pliers, so as to leave an impression when the rivet is sealed up. If the rivet is tampered with the monogram impressed on it is defaced, and must be destroyed to pull out the rivet.

To enable re-lighting the proper official carries a few of these rivets in his pocket, also a pair of pliers which will impress the monogram.

To undo the lamp a rivet is broken off, and when locking up a new rivet is placed in and sealed up by means of these pliers.

When the lamps are returned to the lamp station the rivets are broken off, and new ones placed in next time. These old rivets can be remoulded when heated, and thus made use of again. I have seen this system work with good effect.

The workmen know very well that they cannot undo the lamp without being found out, so this renders it very safe.

It is one careless workman that endangers his fellow workmen's lives, and therefore we must adopt some arrangement in which the locking arrangement cannot be tampered with without detection, and if this tampering is proved the man ought to be severely dealt with.

SPONTANEOUS COMBUSTION.

Q.—What is spontaneous combustion? What do you consider the chief agents which produce it?

A.—Spontaneous combustion is the condition when anything takes fire without the existence of some pre-existing fire (such as a torch or match) It is a frequent occurrence in some mines. Some of the chief agents which produce it are:—(1) Oxidation of the small coals, (2) pressure, (3) artificial heat, (4) iron pyrites.

OXIDATION OF SMALL COAL.—It is now considered that this is the chief factor in producing spontaneous combustion. Wherever there is a heap of small coal lying, the internal part of this heap absorbs the oxygen from air. This generates heat, which is prevented from escaping by the coal on the outside of the heap. This process of oxidation goes on, and as the heat rises to such a temperature that it extends from the inside to the outside of the heap; it then meets with greater quantities of air, and combustion can take place freely, when it will burst out into a flame.

PRESSURE.—Where pillars of coal are left standing over long periods they become subjected to excessive pressure. As the pressure begins to

come heavily on the pillars it cracks and bursts the coal until it finally crushes the sides of the pillars into a heap of small coal. This results in a certain amount of fine coal dust being produced, which absorbs the oxygen, heat being generated. This heat is quite sufficient to cause a fire.

ARTIFICIAL HEAT.—When small coal is lying in proximity to any source of heat, it would immediately absorb it, which would be one of the most favorable conditions for oxidation.

IRON PYRITES.—Some seams of coal contain iron pyrites, and this pyritous coal is thrown back into the waste or gob. It then commences to decompose, heat being generated, especially when moisture is present. This heat may not be sufficient to cause a fire, but if other conditions are favorable to spontaneous combustion, it will greatly assist in initiating a fire.

Wherever spontaneous combustion has taken place the greatest precautions should be taken when dealing with it, as the most deadly gases are given off from these fires.

There are several methods of dealing with these fires, but as the question does not ask for them it is not necessary for me to go into the details.

FIRST AID.

Q.—A man receives a deep cut in the wrist caused by a fall of roof, spurting of blood is observed. What kind of bleeding is this, and how would you arrest it?

A.—A knowledge of ambulance work is of great importance, especially to the miner, because when he descends the shaft he is not really conscious of the many dangers which are constantly lurking near during his term of work.

Accidents are occurring daily in the mine, and may be of a more or less serious nature; in fact, colliery accidents have become so recognizable that the law has compulsorily enforced the provision and maintenance of certain ambulance appliances, so as to render immediate assistance to the injured, prior to the arrival of the physician.

Viewing the subject more seriously, we are almost induced to advocate the organization of ambulance corps for every colliery, which would always be in readiness to relieve the suffering patients.

There are several trades and industries in which ambulance work is considered as a prime feature, and the majority of the hands employed participate in the movement.

In the coal mining trade, which is, strictly speaking, the most perilous vocation, ambulance instruction is regarded with very little enthusiasm; but, on very rare occasions, the subject is treated more gravely, and there are to be found in some mines a class of men who can attend an injury with apparently as much dexterity as could a trained doctor under the circumstances.

In reference to the question under notice, we will assume an ambulance student to be on the ground at the time of the accident. In the first instance, he would, to the best of his ability, ascertain the nature of the wound, by cleaning the surroundings of dirt and stone, and upon further examination he would be able to determine whether more violent injury had been sustained in the shape of fractured or dislocated bones.

Having cleansed the wound, the attendant will now be in a position to observe the manner of bleeding, and if it shows a decided spurting or pulsating flux, he will at once come to the conclusion that an artery has been punctured.

Upon closer examination he will notice that the blood is bright scarlet, a further proof, of arterial hemorrhage.

Before proceeding further, it will perhaps be advisable, to describe briefly the circulatory organs of the body.

The principal agent in all living animals is that wonderful little organ known as the heart. The heart is incessantly at work pumping blood through the arteries which traverse to all parts of the body; at the extremities of the body are small blood vessels, called capillaries; the blood is conveyed through these capillaries, and subsequently through the veins, and after being purified by the lungs, it is finally conveyed to the heart, where it is again discharged into the arteries, and thus takes the same course round the body. The action is repeatedly going on throughout life, the pure or arterial blood feeding and giving nutriment to the body, and the venous, or impure blood, gives up its supply as CO_2 , etc. to the lungs, being expelled in the form of expiration, and the inspired air purifies the blood by feeding it with a supply of oxygen.

The arteries above referred to have various technical names, according to the part of the body along which the artery traverses. The main artery, connected directly to the heart, has branches extending to all parts of the body; and the artery which follows the course of the arm (upper arm) is known as the brachial artery. At the elbow this artery is further divided into two arteries—the ulnar and radial arteries—which run respectively along the bones (ulna and radius); and in the event of the wrist being wounded it is quite apparent that either one or the other, or maybe both, arteries have received a wound. In order to arrest this bleeding, the attendant would have to apply the best means at his disposal.

Being in the mine, it is not natural to suppose that he would be able to treat the wound as exquisitely as in a doctor's surgery; but he would evidently improvise some means by which the hemorrhage could be specially arrested.

Probably the best course would be to apply pressure at the bend of the arm or elbow, when the brachial artery divides into the ulnar and radial arteries; by so doing the course of the blood along these arteries will be prevented.

If a pad cannot be conveniently made, the shirt sleeve rolled up to the elbow will answer the purpose.

In the case of arterial bleeding, it is highly important that the injured limb should be placed in an elevated position; hence, in the case under notice, it will be advisable to flex the fore arm, and secure it to the upper arm by fixing a cross narrow bandage.

If a pad is available, the attendant may apply pressure to the brachial artery a few inches below the arm-pit, and secure it tightly by a bandage. The fore-arm should be flexed and secured in the same manner as already explained.

While preparations are being made for the ap

plication of the pad, digital pressure would have to be resorted to in order to prevent the sufferer losing an unnecessary amount of blood.

[CERTIFICATED ENGINEERS.

Following are the names of those who successfully passed at the late examination and are entitled to certificates of competency—in the several classes.

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" 609	W. A. Baird,	Glance Bay.
" 610	Wm. D. Haley,	Dom. No. 1
" 611	John W. Leach,	Glance Bay.
" 912	George B. Burchell,	Port Morien.
" 613	Daniel Brothers,	North Sydney.
" 614	George Conway,	Glance Bay.
" 615	Ralph Malcolm,	Big Glance Bay
" 616	Frank Aldred,	New Aberdeen

SECOND CLASS.

No. 259. Duncan Cameron, Westville; 607, John D. Fraser, 619 Jas. Sutherland, Stellarton; 618 Wm. Wilkes, Coalburn; 620 Wilbert McKenzie, New Glasgow; 621 J. E. Henderson, Thorburn; 622 S. O. White, Sydney; 623 C. R. Carey, New Campbellton; 624 Arch McInnis, 631 Thomas E. Scott; 634 E. P. Haley, Dom. No. 1; 625 Hector McNeil, 632 Wm. McDonnell, 635 Dl. Hartigan, Sydney Mines; 626 Sl. Waters; 633 Geo. A. Meyers, Caledonia; 627 Gus. McInnis, Port Morien; 629 J. P. McIntyre, Reserve Mines; 630 Peter Ferguson, Bridgeport; 636 Dl. Smith, 638 Robert Hall, 639 H. A. Heighton, Springhill; 637 R. M. Augevine, 6 mile road Cumb. Co.; 640 Wm. McKay, Chignecto; 641 Wm. D. Coates, Amherst; 674 A. F. Ross, Mabou Mines; 678 M. M. Smyth; 685 Nor. McDonald, Port Hood; 680 John Purvis, Inverness, and 628 Cyrus McLeod, Sydney Mines.

THIRD CLASS COMPETENCY.

No. 381 A. R. Stewart, 386 J. R. Fraser, Thorburn; 382 A. D. Power, 385 Philip Higson, 387 Frank O. Nelson, and 644 H. E. Conway, Stellarton; 383 John E. Park, New Glasgow; 384 John D. McDonald, 388 D. W. Marshall, and 389 Robert Wilkes, Coalburn; 390 Gaven Johnson, 642 Jack Fraser, 643 Wm. A. Gauth, Westville; 645 Gus McDonald, 650 A. A. McAuley; 657 Jas. McDonald, 656 Dominic McNeil, 657 John Morrison, 661 Wm. A. McLeod, Port Morien; 646 Cliff McGillvray, 649 Robt. A. Neil, 654 Wm. Payne, 659 John Young, 662 A. D. McKinnon, Glance Bay; 647 Angus McNeil, 648 Alex. H. Allan, Sydney Mines; 652 Ed. Waish, 653 Alex. McKinnon, New Aberdeen; 655 M. J. Gillis, Dom. No. 1; 658 Rob. L. Drew, Caledonia; 660 Alex. S. McDonald, Whitney Pier; 633 Stephen Kennedy, Springhill; 664 Arch. Rison, 665 Leono Betts, Joggins; 675 Rod. McKenzie, 682 Walter Talbot, Port Hood; 676 M. J. Sweeney, 677, L. V. McDonald, 679 Rich. Quigley, 684, M. Sweeney, Inverness; 681 Jos. S. Quigley, Mabou Mines; 683 A. J. McLellan, Broad Cove Chapel.

FIRST CLASS CERTIFICATES.—SERVICE.

304 Alex. McLeod, 305 Jas. Floyd, 306 John A. Blenkinsop, 307 Wm. H. Clarke, 308 Thos. Floyd, 309 Jas. Saunders, Westville; 310 David Reynolds, 312 W. J. Potts, Stellarton; 311 John H. Fraser, Thorburn; 313 Hy. T. Muirhead, 314 Wm. Russell; 315 John H. Hill, Springhill; 398, Neil B. McDonald, New Aberdeen; 404, John A. Ferguson, 416 Alex. McLeod, 418 Jas. W. McKenzie, 422 David MacKenzie, 429 Peter MacKenzie, 702 James Smith, Glance Bay; 412 Samuel Casey, New Campbellton; 417 R. J. Wilson, Dominion No. 3; 419 Jas. A. McDonald, Sydney; 420 Thos. F. Hickey, Reserve Mines; 421 D. F. McDonald, Port Morien; 423 John Wilson, 424 John Egan, 425 Jas. Francis, 426 Ed. Barrie, 427 Dl. J. Stewart, 428 John H. Fraser, 430 J. S. Fraser, 585 Ed. Barry, 431 J. C. Barrington, North Sydney; 432 Dan C. McLean, 433 Jas. McLeod, Dom. No. 1; 673 Dl. McNeil, Bridgeport; 584 Simon H. McDonald, Coalburn.

SECOND CLASS CERTIFICATES.—SERVICE.

WESTVILLE

Numbers in rotation 260 to 271. John Rice, Alf. Workman, Mh. McKenzie, David Wilson, Robt. Herron, Wm. Arnold, Alex. G. Skinner, Jas. Stewart, John Mahoney, Rich. Saunders, Charles Ross, John D. McKenzie, 276 Robt. Dunbar, 293 Alex. Duprey, 295 John Brown, 296 S. D. Fisher, 331 James S. Good.

STELLARTON.

272 John S. McDougall, 275 Arthur Shearer, 278 Hy. S. Patterson, 279 Dl. Flannagan, 280 Jas. Cummings, 377 Jas. W. Cowan, 414 Jas. W. Sutherland.

SPRINGHILL

281 to 290 in rotation, Jas. Coon, H. P. Coon, David Coon, John McCarron, Wm. Cumming, Rich. Letcher, Gordon Archibald, Jules Choisset, H. B. Richmond, Duncan Campbell, 292 Alex. McPherson.

THORBUURN AND COALBURN.

273 Thos. McDonald, 274 John McDougall, 277 Jas. Thompson, 686 Geo. McDonald, 687 Alex. Stewart, 689 And. McPherson, 691 John Clifton, 376 Wm. Park.

SYDNEY MINES.

452 Hugh Stewart, 454 U. Baker, 455 Jas. Bond, 457 to 461 Isaac Orman, Wm. Whalen, Hy. Fraser, Rich. H. Whalen, John Campbell, 463 John R. Butts, 469 Jas. Burnside, 470 Jos. Petrie, 471 Allan McDonald, 586 to 591, Fk. McKinnon, John A. Fraser, Wm. McKenzie, Jas. H. Mann, Hugh Robertson, Thos. Cain, 593 Rob. Preston, 697 Albert Somers.

SYDNEY.

392 Neil. S. McNeil, 393 Wm. McInnis, 397 Arch. D. McLean, 442 L. McInnis, 448 Hector McNeil, 456 M. D. Phalen.

RESERVE

391 Ed. J. McDonald, 394 John Donovan, 399 John Clark, 402 Ed. Gallivan, 446 Geo. Clarke, 467 Wm. Kyle

NEW ABERDEEN.

396 Jas. Edwards, 464 Arch. Morrison, 466 Jos. McIntyre, 693 Edwin Lewis, 703 Thos. Carr.

DOM. NO. 1.

395 A. McInnis, 472 Rodk. McLean.

CALEDONIA.

405 Jas. Burchell, 436 Wm. McKenzie, 438 Arthur McKenzie, 439 Sl. Walker, 443 John Burke,

445 Mal. McKinnon, 449 John McLean.
NEW CAMPBELTON.
407 Lewis McLennan, 409 Rod'k McLeod, 413
Hugh Campbell.
GLACE BAY.
435 Wm. Day, 440 Jas. Robson, 447 Pk. Moran,
465 Dl. Gillies.

MISCELLANEOUS.
291 Robt. Sweetman, Joggins; 294 Geo. Brown
and 298 Lewis Terres, Lower Cove; 297 A. D. Mc-
Donald, Truro; 299 Herbert Lamb, River Herbert;
300 A. G. McDonald, Strathcona; 301 L. C. Forbes
302 B. H. Temple, Waverly; 303 Wm. G. Moffatt,
330 John McArthur, River Herbert; 400 A. Wiley
Stacey, Louisburg; 434 John M. Hurley, Maccan;
437 Arch. R. McLean, McKays Corner; 441 Thos.
C. McInnis, Dom. No. 4; 444 Rheuben Smith, Cow
Bay; 450 John Harris, 451 John McInnis and 453
Neil Stewart, Port Morien; 462 John P. Neville,
Bridgeport; 468 Ang. C. McNeil, Dom. No. 2; 592
Colin McGillivray, New Glasgow.

A NOTABLE GATHERING.

The directors of Allis-Chalmers-Bullock, Limited, celebrated their first semi-annual meeting with their representatives from all parts of the country, by tendering them and the office staff a dinner at the Canada Club, Montreal, lately.

In the centre of the table was a large model in flowers of the crest of the company, a shield bearing the initials A. C. B., flanked with maple leaves and bound with holly. The chair was occupied by Mr. George Bullock, of Cincinnati, who is president of the company and the vice-chair by Mr. Edgar Macdougall, of Montreal who is vice-president. There were over fifty present, all directly interested in the company. Among them were:—Messrs B. H. Warren, president; W. Chalmers, treasurer, and W. H. Whiteside, general manager of sales of the Allis-Chalmers Company of New York, Chicago and Milwaukee; J. S. Neave, vice president of the Bullock Electric Manufacturing Company, Cincinnati; R. W. Chapin, second vice-president and general manager; Colonel Henshaw, H. J. Fuller, J. W. Pyke, Alex. Pringle, Phelps Johnson, W. C. McIntyre, all of whom are directors; W. C. Brown, Lieut. Colonel J. B. McLean, H. Markland, Molson E. Kirke Greene, C. E. Gudewill and others financially interested.

Mr. Bullock, after the toast to the King and the President, referred to the events of a year ago. At that time the company did not exist, and now there were over 50 present all deeply interested in the success of Allis-Chalmers-Bullock. They looked to their salesmen for success, and had every reason to believe they would succeed. They looked to the parent companies the Allis-Chalmers Company, the Bullock Coy. the Ingersoll-Sergeant Company, and the Lidgerwood Company for support and assistance. Without their sustaining powers the company could not exist.

Grand Sec'y Moffatt organized a lodge of the O. P. W. A. called 'Mabou' at the mine of that name ten days ago. There is not a mine of any size in C. E. where there is not a branch of the society

DOMINION IRON AND STEEL OUTPUTS.

The highly interesting figures which we gave yesterday regarding the imports of raw material and the output of the Dominion Iron & Steel Co. show in a partial way the amount of coal, ore, and other raw material required to produce a given amount of steel. Thus we find that in the manufacture of 143,113 tons of steel (the years output,) in various forms, 388,500 tons of coal were consumed, being equivalent to 170,500 tons of coke. Of iron ore, about 270,000 tons were used, with about 170,000 tons of limestone and dolomite. In addition to the steel products there were also large quantities of by-products, such as tar, sulphate of ammonia, and sulphuric acid. The steel output for 1904 it is stated would have been doubled but for the strike. This means that the normal quantity of coal consumed last year would had there been no labor difficulty, have totalled three-quarters of a million tons. In other words the Dom. Coal Co's output would have been about 350,000 tons more than it was, which really accounts for the fact that the coal output was less than expected as it did not exceed that of the two previous years.—Sydney Record.

FROM AN ONTARIO STAND POINT.

The question of reciprocity in coal with the United States is a most important one. No doubt on general principles every important Canadian industry should receive adequate tariff protection, but the coal industries of Nova Scotia and British Columbia are not only not benefited by the duty, but are injured, and will continue to be injured by it. The duty has no beneficial effect on Nova Scotia coal consumed in the Maritime provinces and Quebec, nor on British Columbia coal in that province; but because of the American duty, the trade of Nova Scotia coal is handicapped in the New England States, and the sale of British Columbia coal is similarly handicapped in the American Pacific coast states. The fact that the total exports of Canadian coal in 1904 amounted to only 1,646,505 tons, valued at \$4,346,660 falls against a most important industry. It cannot expand to any considerable extent at home, and must therefore remain practically as it now is, unless the restriction in a most valuable foreign market is removed.

On the other hand, those sections of Canada between Montreal and the Rocky Mountains which last year required more than 7,000,000 tons of foreign coal, valued at more than \$20,000,000 were compelled to pay more than \$2,211,000 for the privilege of importing it.

The question is, how long will the manufacturing and other industrial interests of central Canada submit to paying more than \$2,211,000 in duty upon their fuel ostensibly for the benefit of an industry which does not require it, but is rather handicapped by it Can. Manufacturer.

The mining schools have been opened at nearly all the collieries in the province, and the students are working away like beavers. In the mine by day and a school by night, is surely an adequate illustration of theory and practice.

Maritime Mining Record

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R. DRUMMOND, PUBLISHER.

STELLARTON N. S.

January 25th 1905

CONCERNING MARKETS

A week or two ago the Morning Chronicle propounded some questions to the Sydney Post which the latter has failed to respond to presumably because there is no political capital to be made out of any answers. The Chronicle says it propounds these questions solely from a desire to get more light and not from any carping or captious spirit. The questions are so involved that it would require much space to fully answer them. I will, however attempt to answer them categorically.

"We are told that new markets are needed; why is no reference made to the possibilities of the West India market?"

Because that market has been tried for the past forty years, at intervals, and nothing can be made out of it. Those countries, Britain and the United States, large consumers of sugar can sell at lower rates—than possible for N. S. operators—on account of return cargoes. And from Britain and U. S. ports traffic can be maintained the year round.

"Why is the South American market ignored?"

For similar reasons, and because the market up till the present could not accommodate large coal carriers. The market is also too wide spread. Mr. Ross, however, is to make an effort to find out what the market is worth.

"Why is no reference made to the New England market?"

Because except when strikes were on in the U. S., Nova Scotia could find no market there. During the past ten years the average shipments of round coal to New England ports will not amount to 50,000 tons a year. Some years they have not reached 20,000 tons. The Chronicle is in error in supposing that the New England States now furnish a market for a million tons of our coal. Last year half a million or more tons of slack went, but very little round. The Dom. Coal Co. though it has tried hard, has not yet secured one steady customer for round coal. The rail distance from the nearest mines in the U. S. to Boston and other New England points may be, as the Chronicle asserts, 100 miles further than the water carriage from Louisville. How much real difference does that make? Does it make any. Coal carried to its terminus by cars, direct from the mine, commands a very much better price for some purposes, than coal made small by frequent handling. And it must not be forgotten that in many instances the railroads control the outputs of the mines in the districts through which they run, and carry the coal at a low rate.

"Does it suggest skill when the confession is made that the result of very large expenditures in improving and modernizing the plant and equipment has

been an increase in the cost of mining the coal... It is not difficult to suggest that the anxiety of the coal companies to reach Ontario by way of bonuses and subsidies, instead of attempting to secure the larger and near by markets of New England is that they are outclassed in skill and economy by the mine owners of Pennsylvania and West Virginia, and are not willing to meet them on even competition even when protected by an enormous difference in the transportation rates."

The Chronicle is scarcely patriotic in suggesting that our mines are not as skilfully managed as those across the line. We have a better class of miners, and as skilful officials. But nature has been kinder to the operators in W. Virginia and Ohio etc. than to those in Nova Scotia. Coal can be produced cheaper in the U. S. than in Nova Scotia--as a whole--for a variety of reasons, among these being, shallower mines, seams at lower angles, less water, better roof, all meaning less labor. Owing to the more favorable natural conditions, coal can be produced in some of the districts which now supply the New England market at a dollar to a dollar and fifty cents a ton less than some of the mines in Nova Scotia. Some of our mines are old, while all of those of the U. S. are comparatively new. The deeper the mine the greater the superincumbent weight, the more labor and cost to maintain. An official stated to a RECORD representative the other day that 100,000 pieces of timber were used in his mine monthly. If a piece be taken at 3 cents value then the timber cost is something like \$5000 per month equal to 70 cents cost on every ton of coal extracted; and that for timber alone, and then the greater vertical depth of the mines, makes the cost of pumping higher with us, as a rule, than in the mines of the United States.

If the New England market is so easily accessible as some imagine then the wonder is that Mr. Whitney and his associates, who were chiefly Americans, did not succeed in securing business for the Dom. Coal Co. For half a dozen years or so the head office of the Coal Coy. was in Boston, yet during all that time not one regular customer for round coal was secured. Is the failure to do so a reflection on Mr. Whitney's "skill" If so it proves that lack of skill is not confined to Nova Scotian operators.

A majority of the U. S. soft coals have an advantage over those of Nova Scotia, in that they are less friable. Some years ago the writer endeavoured, when on visits, to ascertain the percentage of slack coal made to round, in several of the mines in Maryland, Ohio and Pa. and found that in some cases it was as low as 25 per cent the average being 32 per cent. Mr. Ross lately declared that the per centage of slack to round in the mines of the Dom. Coal Co. was 55 per cent. In one of our big mines the per centage is even higher. That tells greatly against us.

Every pound of muscle and steam is being crowded on to force ahead the leading places in the several collieries of the Dominion Coal Co. Is this to be the future policy of the company in the winter season! There seems little doubt of it. Getting only partly ready in winter and robbing briskly in summer is not the best of policies, but getting the leading work ahead and keeping it that way is to be commended, and will from this out be the prevailing policy.

Rubs by Rambler.

There are many people who go out of their way to cry wolf when there is no wolf. For instance:—One of the charges against the local government was that it was derelict of its duty in not giving larger aid to the Miners Relief Societies. In parliament a resolution was introduced, by the leader of the opposition, in duplicate, calling upon the government to add substantially to its miserly—so called—grant of three-tenths of a cent per ton towards these societies. The government very wisely turned its deaf ear to this bold request, and instead of increasing the aid to the general fund made provision for increased death indemnity, conditional on the societies making a certain fixed provision in the case of death. The returns from a number of the branches in C. B. afford evidence that the government acted wisely in the course it took, while all that can be said of the proposal of the opposition was that it was the programme of a demagogue. It is known to be a fact that if you tell some men who are perfectly satisfied with things as they exist, that they are being slighted or ill treated they will immediately begin to fancy that they are. The proposal to increase the general grant must be set down as an attempt to create dissatisfaction, or was the proposal of one who had never given careful thought to the subject. The purpose of the Relief Societies is to supplement not to supersede. If they tend to make men thrifless or improvident then they are a hurt and not a help. The words 'three tenths of a cent' may sound small, but with increasing outputs, and with the fractions multiplied by three or four hundred thousand the total becomes fairly respectable. One of the branches has \$10,000 and another \$6,000 to its credit. Had the allowance been increased there might have been a disregard of due economy. While it may not be advisable to make an increase to the common funds of the societies it might be well that the government set apart yearly something for a special fund. This special fund to be drawn upon only in the case of accidents involving the loss of more than four lives, and where the funds of the branch would be insufficient for the contingency. To my mind it seems imperative there should be some change in the manner of the government grant. It should not be the same in all cases. Dom. No. 1 has the biggest balance, and ought to have for its production the largest in proportion to the number of men employed. And a similar thing may be said of all the machine mines, in comparison with mines where hand pick miners predominate. At the present time the machine miners are getting more than their just share of what the government gives. If the government gave branches at machine mines a quarter of a cent per ton and at hand pick mines two-fifths of a cent it would equalize matters largely. But if objection is taken to any diminution of the grant to machine miners, then let it remain as at present and increase the grant to hand pick miners.

My impression is that fatal accidents at the coal mines were not so numerous last year as in some of the years immediately preceding. It should be noted

that there have been no serious mishaps from explosions, though a man or two was scorched from the setting off of gas. The days when explosions were frequent and accompanied, at times, by great loss of life, are beginning to fade from memory, and it is to be hoped that the years to come will keep relegating them to the past. Of an explosion it may be said that it was an unpreventable accident. The same thing cannot be said of all the fatal accidents that occurred during last year and the year preceding. A majority of these were occasioned by falls—negligence—or by boxes—disobedience of orders. Men will take risks; and men and boys will persist in going where they should not, and doing things which discipline forbids. There has been a notable increase of late years in accidents from falls. These may be classed as preventable, as in most cases they arise from the riskiness or carelessness of the men and the laxity of the bosses. The best of discipline will not prevent accidents, but it certainly lessens them when properly enforced. There is a ready remedy for many of the accidents through falls. Let the rules be strictly observed by both miners and officials, and let the deputy inspectors be a little more emphatic as to their strict observance. Is the mining law, are the special colliery rules enforced? I have my doubts in some cases.

I have often wondered how it is that the men who work on the surface, in past years at any rate, if not still, were, and are "biener"—to use a word I have heard Scotchmen utter—than those who work in the mine, though in a majority of cases the wages received by the latter are higher than those earned by the former. I have often asked how this came about but never got a quite satisfactory answer. One reason given was there was waste unavoidable, in the piece cans which the pitmen were obliged to take with them into the mine. The cans have to go out well filled whatever the capacity of the carriers for disposing of their contents. And further that the miner requires more and more sustaining food than the surface worker. I have also been told that the pitmen went through more clothes, but I took no stock in that, as any old duds are made to do service for mine work. I am left to wonder if the habits of the two classes are not a little different. The mechanics, the blacksmiths, enginemen, carpenters etc, are, say if you like from habit, more industrious, on the whole, than the underground workers. It wont do to say, 'no thanks to them; look at the conditions under which they labor they have sun and day light' True, but they have also snow and zero weather, as in the past few weeks. The old saw is 'A man cannot have his cake and eat it' Not elegant but expressive. A man cannot have comforts without paying for them, and if the underground men in many cases are snigger in their surroundings than the underground men it is simply because they have paid for them. Paid for them; "How, what do you mean" I mean that he has paid for his comforts by denying himself frequent off days. Mr. Daniel Cameron, foreman carpenter at the Albion, like all intelligent men at the collieries whatever their particular calling, a subscriber to the RECORD, and moreover a paying subscriber, and not a spinger—calling at the Record office was asked the question briefly "Loafing to-day, or no work?" "I am just taking a holiday or two. I have only lost ten days in forty years, and the days I lost are more than covered by overtime.

indeed I may say if the books were examined it would be found that in forty years I had worked full time." If Mr. Cameron and others of his class are bien the reason may be plain. I do not say that men should follow his example and try to lose only ten days in forty years. But they might be content with 10 days a year, until they have made full provisions for all rainy days.

A while ago Bradstreet stated that the exporting of coal to England would soon be a feature of the Nova Scotia coal trade. When that happens one should look for the stoppage of all importations from across the water. The RECORD stated a few weeks ago that the importations of British coal to the St. Lawrence had been in great measure checked in 1904, and though the statement was made before the official figures were published, it has turned out to be correct. There was only the half imported last year as compared with '03. The St. John papers gave out the statement, and it was copied into many papers, that the importations of British coal to the province of N. B., was year by year increasing. The imported coal is however used for particular purposes, and not for general steam purposes. I do not think Nova Scotia need hope to profitably export coal to Britain for many years to come. The only hope is that by and by she may be able to compete with British coal in parts of continental Europe where there is little or no coal production. This year may probably be a good year for experimenting. If the strike of the German miners is prolonged it certainly will have the tendency to increase prices in Europe generally. Whether the increase in price will be great enough to permit of coal being sent across at a profit remains to be seen. It might be well for the two big C. B. coal companies to be ready for any probable or possible contingency.

The first quarter's coal shipments of 1904 fell so far short of those for 1903 that it took the whole of the remainder of the year to recover the lost ground. Indeed there was not a full recovery as the published figures for the year showed. Notwithstanding the buoyant tone of the operators who were interviewed by the Halifax Chronicle I confess to no feeling of elation at the way trade is moving at present. It is slow, provokingly so. Indeed at the present moment it looks as if the first quarter of 1905 would be as bad if not worse than that of 1904. It is said that the railways are stocked with fuel. The I. C. R. has out of its supply almost entirely, the reason given being want of power to move coal. If shipments are to be reduced then costs will mount still higher, and the operators will be in a rather awkward plight. For the railway mines, trade conditions, at this season, are very far from bright, for lack, as I have stated, of motive power to move the mineral. A turn may come by and bye.

That agreement between the Dominion Coal Coy. and its employees is still the talk at the mainland collieries. It is reported that while Mr. Jas. Ross thinks he has not made bad out of it, that the men are of opinion they have not been caught napping. The wonderful thing to the initiated as well as to the uninitiated is how Mr. Ross came to play a lone hand. How was it that he did not in any way consult the other operators before moving. And a further wonder is: How

did the company's men, or the sub-council take it upon themselves to sign the agreement without consulting the members attached to the other collieries. One thing is evident, say the operators of the mainland namely, James Ross would never have asked his men to enter into an agreement for three years, had he not some substantial reason. Tell them that his reason was to be in a position to make attempts to send coal to Ontario and they answer with a smile: "There is more than that behind it" I wonder what is there behind.

I was asked point blank, the other day, by a coal operator, what I thought of that much talked of, so called agreement. The suddenness of the question winded me and I was speechless. After an effort I was able to make the sign of the circle. "Ah" wasthe response, but whether interrogatory, or merely ejaculatory, I could not for the moment determine. As silence ensued I construed it in the former sense, so added slowly, "I cannot well make it out, for I see no penalty. The carrying out of the agreement is left solely to the honor of the contracting parties." "And you don't lay much stress on that" was the next query. To which I replied, "I wouldn't say that, that may be the strong part of it,—if it is not too ideal, just yet. Looked at from a layman's point of view, I do not think the agreement has much legal force, but morally both parties may think it binding, and strive to live up to it. And it is here I am stuck. Both parties must know that it is not of much legal weight, and how they bank chiefly on its moral force puzzles me, for the reason that I see from letters in the papers that some of the employees look upon the employers as tyrants and extortioners, and,—though I haven't seen it in the papers I make no doubt—some employers look upon their employees as unreasonable and unjust. If these are the prevailing opinions, one party of the other, how comes it that the agreement hangs so little on law and rests so much on promises. Is it possible that the signing of the agreement marks the dawn of a better day. Has the night of distrust and suspicion been dispelled by the rising rays of mutual trust and confidence." I got this length when he interrupted and said "Stop it, when you attempt to be flowery you're a failure; you're strong point is being matter of fact." As I thought I was commencing to do fine, his snub sent a cold chill down my spine, so hardly concealing my annoyance I asked "Well then what is your opinion of the blooming agreement, as a Sydney Mines man calls it" His reply was:—"Well, Rambler, as you are not wholly a bad sort, I'll tell you on the quiet. To use the Sydney Mines man's adjective it is a blooming fa—". Here came my innings I sharply said "Stop it, the two D's are friends of mine, and so are some of the other signers of the document, and I won't hear a word reflecting on their bona fides." He looked amazed at my tenacity then said, "Well, tell me this, do you think the sub-council did right to sign without consulting Grand Council." "I'll answer that" I said "when you tell me if Jas. Ross did right in playing a lone hand." The argument is still on as to who should answer first.

The "working" places in International colliery C. B. have been idle for some weeks back; the leading places however are being opened up with all speed.

AROUND THE COLLIERIES.

A supplementary dynamo has been installed at Dom. No. 1.

Sydney No. 3 was idle the first three weeks of the year. It has started again, single shifted.

Mr. E. McDonald, formerly of Pictou, has now one of the best appointed businesses in S. Mines.

Port Hood has not been busy the first weeks of the year. Scarcity of cars is the reason given.

Business around Glace Bay at the present time is dull and business men are loudly complaining.

It is rumored that Mr. Ratchford is to take the management of the Company's store at Sydney Mines.

P. W. A. lodges have been organized at Mabou, and Broughton, Sydney No. 3 has also organized a lodge for itself.

The mine Examiners at Sydney Mines have all secured the necessary certificates. This probably applies all over the collieries, unless the law is being winked at.

The ratepayers of Sydney Mines are complaining about excessive taxation. They assert they are more heavily taxed than the people in any other town on the Island.

The new landing at Hub colliery shows marked improvement in the quality of the coal. The new lift has lately been opened up,—levels driven etc, and will give much more pit room.

Light trains are now running over the short line connecting Dom. No. 6 with the Sydney and Louisburg Railway. Ballasting can not go on until the frost is out of the ground.

Mr. John Douglas, proprietor of the Glace Bay Gazette, acted as solicitor for the P. W. A. in the framing of the agreement, signed by the Dominion Coal Co. and its union employees.

Mr. Moss, Gd. Master of the P. W. A., paid Sydney Mines a visit some time ago. Later the Gd. Secy. visited Drummond Lodge and stated things that should prove serviceable in future.

Reserve miners take two weeks off with their fellow workers in turn, that is two weeks off, and two weeks on duty. Carrying tools from place to place is perhaps the most disagreeable part of the arrangement.

Dom. No. 1 is to be pushed out under the sea. The strata between the coal and the water is not very thick, but still is more than called for by the mining law. Extra precautions however, will be taken on entering this unworked section of the seam.

The colliery at Port Morien will not do much for the next six or eight weeks. At present all the places are idle excepting two levels, which will give coal sufficient to run the plant, and supply the town with house fuel.

Sydney No. 1 is working as steadily as can be expected at this season of the year. The last steamer of the season was loaded on the 21st. for Newfoundland. Though no shipments by water will be made for two or three months the blast furnace and coke ovens should keep the pits moderately steady at work.

The carpenters on the Marconi towers at Port Morien struck lately for higher wages, and no wonder. They work at a high elevation and must have full share of the biting windy wintry weather that has prevailed the past weeks or months.

There are about 100 empty houses in and a vicinity thereof. To see company houses unoccupied, and many of them boarded up, is new about the C. B. collieries, with the exception perhaps of the district mentioned.

The fault on the east side of the Port Hood colliery, which in the two upper lifts was pierced by a rock tunnel, has been passed on the lower lift by simply turning the levels uphill. This means money saved as rock tunnels are somewhat expensive.

The Mining School has started at Sydney Mines with Mr. David Brown as Instructor. There are a large number of young men in attendance. Mr. Brown has been Instructor for four successive years, and his efficiency is attested to by the results of examinations and the success of his pupils.

It is expected that the Dominion collieries will raise 250,000 tons during the winter months. In April the amount may be increased. It is said the summer months will show an output monthly of from 350,000 to 375,000 tons, or in the vicinity of 15,000 tons daily.

Very little is being done at Broughton, and enquiries are made as to the cause. There were those who predicted that much water would be encountered in the sinking owing to the location of the slopes, and water has proved to be a hindrance to progress. If boilers are indication of coming power then evidence is not wanting as four new boilers are lying between the mine and the S. & L. Ry.

Mr. C. J. Coll, Agent of the Acadia Coal Co. left Halifax on the morning of the 23rd. for the West Indies. He will be absent for about six weeks. His friends all trust that the trip may prove beneficial. The heavy work of the past few years was beginning to tell on his health, and his medical advisers ordered him to leave Stellarton at once. There is no organic trouble.—Rest is essential.

At three o'clock on Thursday afternoon a tram loaded with timber was pushed into the open man shaft at No. 2 mine, falling the nine hundred feet to the bottom, and then crashing through decking covering a 85 ft. slump. The men were kept in the mine until near 7 o'clock before the wreckage was sufficiently cleared away, to allow them to make their exit from the mine. The cage was standing at the surface and the cage tender started to push the loaded tram into it, when it suddenly started away and it was unable to hold the tram back. The driver of the hoisting engine, has been suspended pending an investigation.—Glace Bay Gazette.

AROUND THE COLLIERIES.

The No 2 mine deep at Inverness has to go a long distance yet before it reaches water mark.

The Drammond colliery is doing fairly well these days with an average output of 975 tons daily.

The coal in the deeps of both mines of the Inverness Ry. & Coal Coy. has improved greatly upon the rise coal.

Development work, that is 'narrow' work at Dom. No. 3 is being prosecuted vigorously. The mine will be in excellent shape for next season's shipments.

The output of the Acadia colliery, Westville, has improved considerably of late. It is now up again to about 300 tons per day with prospects of improvement.

The new Capell fan at Dom. No. 3 was started a short time ago. The size is 7½ by 13 feet. It is called a daisy by those who have seen it. Dom. No. 3 has now an excellent ventilating plant.

Norman McDonald of Dom. No. 3 checkweighman, is out as councillor. He thinks there are more things that require checking than coal. Norman will be well supported and ought to get there.

By and bye the chaps who keep the records will be telling us that we were all mistaken in thinking that there were more 15 to 20 below zero days this Jan'y. than in any for the past quarter of a century.

It is the intention of the management to double track the No. 1 mine at Inverness, and continue the deep down to No. 6 lift, and generally put the mine in fit condition for an output of 1200 tons per day the coming summer.

Among the improvements contemplated at the Inverness Ry. & Coal Co's mines are, a second picking table, and tippie, and an additional boiler. When these are effected the mine is expected to give a good account of itself.

Under the heading "Notes from Mabou Mine" the Glace Bay Gazette gives credit to the Richmond Record for three full sticks of matter which—if printed in the Richmond Record without credit,—were stolen from the MINING RECORD.

The sinking of the Allan shafts was discontinued for two or three days to permit of the contractor for the sinking, and the agent of the Acadia Coal Co. having a quiet discussion over a knotty point without interruption. When the argument closed the work at the shafts opened up again. The stoppage was the occasion for some fearful and wonderful stories, such as:— They struck the 3 foot seam at 700 ft. instead of 300 so something is far wrong! "They have stopped because they now find the distance to the coal will be 2000 feet." "Coll stopped the contractor because in 100 ft. the shaft was 14 ft. out of plumb" and so on. In future when work at the shaft stops temporary notices should be immediately posted giving all the whys and the wherefores.

In the No. 2 mine at Inverness the deeps were driven 630 ft. in 1904. The No. 2 level east 888 ft.; and the No. 3 level east 900 ft.; the No. 3 level west was driven 410 feet. The distance from the surface to the face of the deeps is 1800 feet.

The coal from No. 2 mine Inverness has been hauled through No. 2 level to No. 1 slope and delivered at the No. 1 bankhead; the total output for the year 206,159 tons was hoisted out of No. 1 mine. Though there was an increase of only 2,000 odd tons in shipments the output increased by 40,000 tons.

The old six ton hoppers look like pigmies alongside the new 15 ton I. C. R. hoppers of which a large number are now circulating over the road. If there is a scarcity of cars at some collieries, there cannot be a famine at others judging from the number of empties that pass east from the Record Office. It requires no small number however to give each colliery a share.

In last issue mention was made that the coal in a section of the Acadia had been cut clean off as with a knife. The RECORD is glad to learn that the cutting off was simply a downthrow. The coal has been recovered; similar faults had been previously encountered. Mr. Blackwood has done good work since he went to the colliery,—of course under the direction of Mr. Blenkinsop.

Replying to Mr. Alex. McNeil's letter the correspondent whose remarks Mr. McNeil criticised says:—

"But Mr. McNeil does not yet make plain what the Halifax Board of Trade committee want. The iron ores that come within the systematic district work of the Geol. Survey have been examined and reported on as well as the gold and coal. What more can be done, how, and where."

During 1904 there was a large amount of development work done in the No. 1 mine of the Inverness Ry. & Coal Co. For instance the deeps were driven 650 feet; the No. 3 level west 50 ft. the No. 4 level west 450 ft.; the No. 5 level west 205 ft.; the No. 3 level east 1000 ft.; the No. 4 1081 ft.; and the No. 5, 185 ft. The No. 1 deeps are now 1300 feet under the ocean, and have an ample cover of 630 feet. The total distance from the surface to the face is 2700 feet.

The average daily wage of cutters at the Springhill collieries for the month of December was \$3.06, making the grand average for 1904 paid coal cutters \$2.98½ per day, or 1.03½ cents higher per man per day than the average from 1885 to 1899 inclusive. It must be admitted that the wages were good, probably higher than at any other colliery in Nova Scotia. Of this of course, the RECORD cannot be certain but that is the impression. It might be useful if there was a table showing the average for the mainland and Island and what have been the increases during the past three years in comparison with the years preceding.

AROUND THE COLLIERIES.

A little fluff of snow has a big effect on the regular running of the tram cars between Stellarton and Westville.

Civic election enthusiasm in Stellarton is up to date as flat as a flounder. Nearly all the departments are so well manned that council supervision is merely formal.

Unless the town council and detective force in Stellarton get a move on, the town will acquire a reputation of being a small burglars' paradise. Of late there have been many small burglaries and attempts at burglaries, and only one capture.

Mabou Mines are beautifully situated on the sea shore, and lie at the foot of the many hills, which act as sentinels to the Mabou coast, on the Gulf of St. Lawrence. There appears to be abundance of coal of good quality, proven by the number of slopes that have been sunk. The angle of 15% in the lower part of the slope is the angle of dip and rise natural to all the other coal fields of Inverness. The land part of the slopes shows the heavy dip peculiar to the formation of the country around. The proving of the seam is being continued, and evidence daily being produced pointing to this as one of the most extensive coal fields in the county of Inverness.

Here is a little sum in arithmetic which the instructors of the mining schools may give to their pupils by way of recreation. There is no puzzle about it, and it can be done by the plodder as soon as the genius:—The boss of one of the C. B. mines asked a timber man to count over a pile of cap pieces. After the job was finished the boss asked how many pieces there were. The man answered "I found if I counted them two, three, four, five or six at a time there was always one over, but if I counted seven at a time they came out square." The boss looked at him and asked, "What mining school do you go to MacEachren's or MacInnis?" How many cap pieces were there?

Mr. Jas. Ross president of the Dom. Coal Co. having gone to Mexico for a few weeks, it devolves on Mr. Wanklyn one of the Vice Presidents to entertain the newspaper men, and through them the public. In a late interview Mr. Wanklyn stated that the German miners strike will cause the price of coal in Canada to advance. He gives as his reason that 47000 tons of British coal came into Canada last year, chiefly in ballast, and if the strike continues the price of British coal will go so high that it cannot be brought as ballast. While the RECORD thinks that the strike if prolonged may cause some demand for coal, yet the demand, not likely to be in the hundreds of thousands of tons, will not have any appreciable effect on prices. If 47000 tons is stopped from coming in it is of course a small mercy to be thankful for, but only, after all, a drop in the bucket in view of the possible large outputs. What we are after these days is not so much increased prices as increased sales. Coal cannot be put higher, without injury to the trade.

Mr. C. Fergie, Vice Pres. of the Intercolonial C. Co. and Chief Engineer for the Inverness Ry. & Coal Co. went to Inverness on Monday on important business.

The report that the Dom. Coal Co. have "intentions" on the coal areas at Victoria mines is again current, due to the fact that the company has had some of its surveyors on the ground lately.

Not very much is appearing in reference to the strike of the German miners. It is said to be possible that there may be a sympathetic strike in Belgium. The miners are much better officered and organized in Belgium than in Germany.

It is reported that the Dominion Iron & Steel Co. has secured an order for 25,000 tons of steel rails for the Grand Trunk. This is called a "large order"; the smallness of it, unless it is experimental only, leads the RECORD to suspect its accuracy, unless indeed the rails are for the old roadbed.

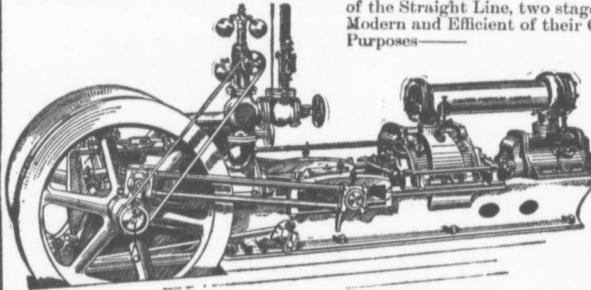
The Eastern Journal says that Mr. Pearl the lessee of some coal areas in Richmond County will soon begin vigorous prospecting. The RECORD's best wishes—and sympathies—go with the prospector. From our experience of that county Mr. Pearl has a hard road to travel. The metals are very contrary and the strata disturbed. Just as at Whycecomagh where there is iron everywhere and—nowhere—as yet found in quantity, so with coal in Richmond County.

In St. Petersburg the workmen struck on a large scale last week. The masters said the demands of the workmen meant ruin to business, that is some of the demands. In Russia the working day is eleven hours; the strikers want a reduction to eight hours. After the refusal of the masters, the strikers headed by a Priest proposed to present a petition to the Emperor. For this purpose they formed a big procession and were proceeding to the palace, when the military ordered them back. They continued to advance and were fired upon. A large number are reported killed. St. Petersburg is now quiet, but it is said the strike is extending to the large manufacturing districts outside the capital.

A Correspondent of the Provincial Workman takes exception to the agreement between the Dominion Coal Coy. and its employees, on the ground, from a workman's standpoint, that it interferes with and makes inoperative, certain parts of the constitution of the P. W. A. He asks for instance, "How can we strive to secure better remuneration or shorter hours of labor, two objects of the society, for three years, or while the agreement is in force?" The agreement, possibly, is open to assault, but the correspondent's points may not be well taken. The signers of the agreement on behalf of the P. W. A. may have thought that by signing they were adopting a plan likely to secure better remuneration for its members, during the ensuing three years. And who can say to the contrary. At the present it does not look as if there will be a soon boom.

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Synopsis of Regulations for disposal of Minerals on Dominion Lands in Manitoba, the Northwest Territories and the Yukon Territory.

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 2000 pounds shall be collected on the gross output.

Quartz—Persons of eighteen years and over and joint stock companies holding free miner's certificates may obtain entry for a mining location. A free miner's certificate is granted for one or more years, not exceeding five, upon payment in advance of \$7.50 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 a place, may locate a claim 1500 x 1500 feet by marking out the same by two legal posts, bearing location notices, one at each end on the line of the lode or vein.

The claim shall be recorded within fifteen days if located within ten miles of a mining recorder's office, one additional day allowed for every additional ten miles or fraction. 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 an acre.

Permission may be granted by the Minister of the Interior to locate claims containing iron and mica, also copper in the Yukon Territory, of an area not exceeding 160 acres.

The patent for a mining location shall provide for the payment of Royalty of 2 1/2 per cent of the sales of the products of the location. **Placer Mining**—Manitoba and the N. W. T., excepting the Yukon Territory.—Placer mining claims generally are 100 feet square; entry fee, \$5, renewable yearly. On the North Saskatchewan River claims are either bar or bench, the former being 100 feet long, and extending between high and low water mark. The latter includes bar diggings, but extends back to the base of the hill or bank, but not exceeding 1000 feet. Where steam power is used, claims 200 feet wide may be obtained.

Tredging in the rivers of Manitoba and the N. W. T., excepting the Yukon Territory—A free miner may obtain only two of five leases of five miles each for a term of twenty years, renewable in 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, but where a person or company has obtained more than one lease one dredge for each five miles or fraction is sufficient. Rental, \$10 per annum for each mile of river leased. Royalty at the rate of two and a half per cent collected on the output after it exceeds \$10,000.

Dredging in the Yukon Territory—Six leases of five miles each may be granted to a free miner for a term of twenty years, also renewable.

The lessee's right is confined to the main river bed or bars in the river below low water mark, that boundary to be fixed by its position on the 1st day of August in the year of the date of the lease.

The lessee shall have one dredge in operation within two years from the date of the lease, and one dredge for each five miles within six years from date. Rental, \$100 per mile for first year and \$10 per mile for each subsequent year. Royalty same as placer mining.

Placer Mining in the Yukon—Creek, gulch, river and hill claims should not exceed 500 feet in length, measured on the base line or general direction of the creek or gulch, the width being from 100 to 3000 feet. All other placer claims shall be 200 acres or less.

Claims are marked by two legal posts, one at each end, bearing not less than 1000 feet from the river or creek, and the other at least 100 feet from the recorder's office. One extra day allowed for each additional ten miles or fraction.

The person or company claiming a claim must hold a free miner's certificate. The discoverer of a new mine is entitled to a claim of 1000 ft. in length, and if the part or most of two, 1500 feet a recorder, on the amount of which no royalty shall be charged, the rest of the part, ordinary claim at 1 per cent.

Entry fee \$10. Royalty at the rate of two and one half per cent on the value of the gold shipped from the Yukon Territory. To be paid to the Comptroller.

No free miner shall receive a grant of more than one mining claim on each even rate river, creek or gulch, but the same miner may hold an number of claims by purchase, and no miner may work the same mine in two different ways, saving notice and paying fee \$100. A claim may be abandoned, and another obtained on the same creek, gulch or river, by giving notice and paying a fee.

Work must be done on a claim in each year to the value of at least \$500. A certificate that work has been done must be obtained each year. If not the claim shall be deemed to be abandoned, and open to occupation and entry as a new mine.

The boundaries of a claim may be altered at liberty by having surveys made and publishing notices in the Yukon Office.

Petroleum—All unappropriated **Traps in Manitoba, the North West Territories and within the Yukon Territory**, are open to prospecting for petroleum, and the Minister may reserve for an individual or company, having no claim on the land to be prospecting on an area of 1200 acres or less, as he may decide, the length of which shall not exceed three times the breadth. Should the prospector find oil in paying quantities and satisfactory evidence which such discovery, an area not exceeding 600 acres, including the oil well, will be sold to the prospector at the rate of \$1 an acre, and the remainder of the tract reserved, amounting to 1200 acres, will be sold at the rate of \$3 an acre, subject to royalty at such rate as may be specified by Order in Council.

W. W. CORY

Dept. Interior, Deputy of the Minister of the Interior

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The Wire Rope Catalogues of the B. Greening Wire Rope Co'y is to hand, and a very useful booklet it must prove to be to all users of wire rope. All kinds of ropes are referred to. A new rope is the Acme steel wire rope, made of a higher grade than the best plough steel, and intended to meet the demand for a hoisting rope possessing the highest possible strains and for use in hazardous places where life is at stake. There are many tables showing the breaking strains, and the proper working loads; and also the proper size of sheaves or wheels to be used to obtain the best results. The various kinds of fittings and splices are shown. To users of wire ropes this catalogue should be of much service. It can be obtained free on application to the B. Greening Wire Co., Hamilton, Ont.

A NEW PLAN.

Speaking at the annual dinner of the Leeds Association of Engineers, Sir, James Kitson, M. P. referred to a recent paper by Mr. Gale on his new method of freezing air. That method, he said, was really a most remarkable improvement and development of the use of the blast furnace. For several months they had been working at a furnace at Pittsburg with frozen air. As they knew, there was more moisture in the air in summer than in winter, and if you freeze the air you reduce the moisture. The result of that had been that the burden of the Gale furnace had been increased from 2510 tons per week to 3129 tons per week—an increase of 620 tons per week, simply by the use of frozen air, with the same furnace and the same plant; and the saving in coke has been enormous—from 2147 tons per week to 1726 tons, a difference of 421 tons, or nearly 4cwt to the ton. Reckoning coke at 1s per cwt, they would easily see what that saving amounts to. Foreman engineers ought to acquaint themselves with these various processes.

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F 4 27	12 7	1 4	Craigmore	F 9 06	3 01
F 4 45	16 9	1 5	Judique	F 8 51	2 54
F 4 55	21 1	2 0	Catharines Pk	F 8 31	2 44
F 5 07	27 6	2 1	Port Hood	L 8 06	2 34
F 5 20	32 5	2 2	Glencoe	L 7 45	2 24
A 5 28	37 2	2 3	Mahou	F 7 14	2 14
L 5 45	44 5	2 4	Glendyre	F 6 50	2 05
F 5 55	49 4	2 5	Black River	F 6 30	1 55
L 6 05	54 3	3 0	Inverness	F 6 07	1 45
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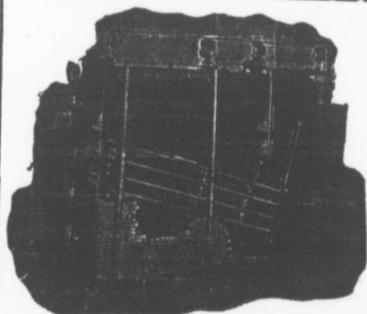
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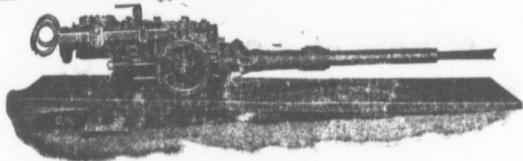
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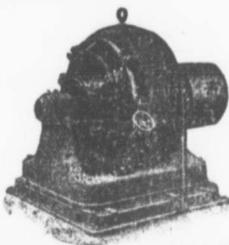
HARRISON IMPROVED COAL CUTTERS.
 AIR COMPRESSORS
 —of all Descriptions—
 LITTLE GIANT STEAM OR AIR DRILLS
 MANUFACTURED BY **Canadian Rand Drill Coy Works, Sherbrooke Que.**
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**Electric Locomotives,
 COMPLETE MINE
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—Mining Catalogue No. 19—

A full line of Direct Current Machines has
 been especially designed for Power Plant In-
 stallations for coal Mines.



—JEFFREY 150 KILOWATT, GENERATOR—

The Jeffrey
 Mfg. Co.,
COLUMBUS
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The DOMINION WIRE ROPE CO., Limited.
 Manufacturers of High Grade WIRE ROPE
 for Hoisting, Haulage and Colliery purposes. **MONTREAL.**

AUSTEN BROTHERS ✚ HALIFAX AGENTS.

Acadia Coal Company, Limited.

STELLARTON, NOVA SCOTIA.

Miners and Shippers of the

CELEBRATED

ACADIA COAL.

Unexcelled for Steam, Domestic and General Purposes.

DELIVERED BY RAIL OR WATER.

SHIPPING PORT: PICTOU LANDING.

Quotations Furnished Promptly on Application.

MARITIME COAL & RAILWAY CO., Limited,

Miners and Shippers of

CHIGNECTO HIGH GRADE COAL.

Steam AND Domestic

Unexcelled for General Use.

Shipments to all points reached by the
Intercolonial Railway.

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

JAMES BAIRD, Mine Manager.

DAVID MITCHELL, General Manager.

The BROWN MACHINE COY.,

New Glasgow, Nova Scotia.

Coal and Gold Mining Machinery a specialty

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

Complete equipments furnished for Coal or Gold mines.

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

Estimates Cheerfully given.

CORRESPONDENCE SOLICITED

JOHN L. BLAIKIE ESQ. PRES. E. WRATHBUN ESQ. VICE PRES.

THE BOILER INSPECTION & INSURANCE CO.

OF CANADA



B. I. & I. CO.

CONSULTING ENGINEERS

G. C. ROBB CHIEF ENGINEER HEAD OFFICE TORONTO

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.. BOILERS ..
....LAST INSPECTED I....

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—OR TO—
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Amherst, N. S.

WIRE ROPE All Kinds and Sizes
and for all purposes.

GREENING Standard and Lang's Patent

—ROPE FITTINGS— —Prices Right— Lay. Prompt Shipments.
—ROPE GREASE—

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

MADE IN CANADA.

**FRESH GROUND
FIRE CLAY.**

Equal in quality to Scotch Clay. Sold in bulk or in bags
Our prices are considerably lower than the imported
Article.

Write for prices and full particulars.
INTERCOLONIAL COAL MINING CO., Limited,
WESTVILLE, NOVA SCOTIA.

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

GOWRIE AND BLOCKHOUSE COLLIERIES, LIMITED.

OF NEWCASTLE ON TYNE.

MINE AND LOADING PIERS, PORT MORIEN, COW BAY

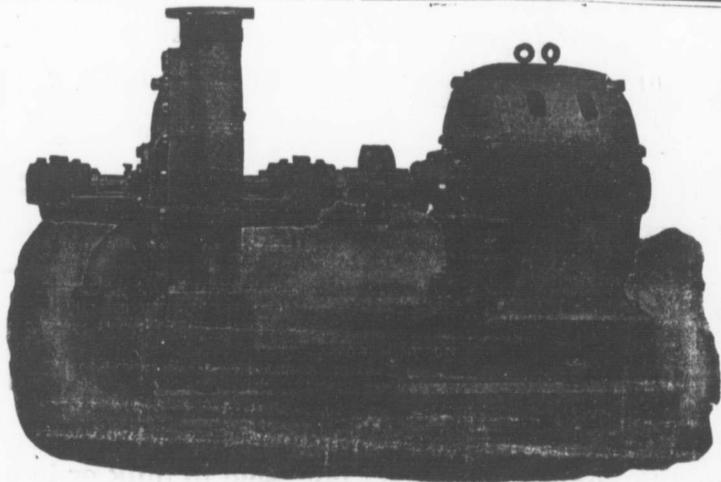
CAPE BRETON, N. S.

Miners and Shippers of **GOWRIE COAL.**

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

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

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



PATENTED

EIGHT INCH SINGLE-STAGE Worthington TURBINE Pump

Driven by an induction motor. Capacity 1,800 Gallons per min. against 70 feet head.

THE JOHN McDOUGALL

Caledonia Iron Works Co., Limited.
Builders for Canada **MONTREAL.** Send for Catalogue.

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 32 " "
OXYGEN.....	7 34 " "	6 72 " "
NITROGEN.....	1 16 " "	1 27 " "
SULPHUR.....	0 56 " "	3 07 " "
ASH.....	2 30 " "	4 10 " "
WATER.....	3 35 " "	2 11 " "
	100 00	100 00

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

Shipping facilities at Sydney, and Louisburg, G. B., of most modern type. Steamers carrying
—5000 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.

✻ Applications for prices, terms, etc. should be made to ✻

ALEXANDER DICK, General Sales Agent, Glace Bay, N. S. Canada.

Abner Kirgman, Gen'l Sales Agent, for the St. Lawrence, Montreal, P. Q.
M. R. Morrow, Agent, 50 Bedford Row, Halifax, N. S.
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C. C. Marvel, 95 Milk Street Boston.

Peate Bros. & Company, Charlottetown, P. E. I.

R. P. and W. F. Stann, Agents, St. John, N. B.
A. Johnson and Co., Agents, Stockholm, Sweden.
Hull, Blyth and Co., 4 Fenchurch Ave., London, Eng.
G. M. Stanwood, Portland, Me.
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G.H.DUGGAN. - THIRD 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%	27.95%	28.41%
Fixed Carbon.....	75.29%	67.47%	64.69%
Ash.....	3.75%	3.19%	4.19%
	100.00	100.00	100.00
Sulphur.....	1.15%	.58%	.79%

BEST COAL FOR

LOCOMOTIVE USE.

Delivered By Rail or Water

BEST COAL FOR
GENERAL STEAM PURPOSES.

The year Round

BEST COAL FOR
DOMESTIC CONSUMPTION.

IN Lots To Suit Purchasers.

BEST GAS COAL

Mined in the Province.

Mined

SPRINGHILL

N. S.

Head Office

MONTREAL