

THE CANADIAN

MINING

MANUAL

1890-1.

TN 26
A2
C2
fol.
1890/91

W. T. A. BROWN

NEW YORK BELTING & PACKING CO.

J. H. CHEEVER, Treasurer, } 15 PARK ROW, NEW YORK, U.S.A.
 J. D. CHEEVER, Dep'y-Treas. }

Oldest and Largest Manufacturers in the United States of



EXTR

Circular Woven
 "CABLE" Type
 of Steam
 Mi



CANADA

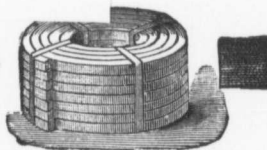
NATIONAL LIBRARY
 BIBLIOTHÈQUE NATIONALE



R

SQUARE STEAM PACKING,

For Packing the Piston Rods and
 Valve Stems of Steam
 Engines and Pumps.



U.S. SALESROOMS:
 PHILADELPHIA, 308 Chestnut St.
 BOSTON, 52 Summer St.
 CHICAGO, 131 Lake St.
 DENVER, 1601-1611 17th St.
 CHARLESTON, 160 Meeting St.
 GRAND RAPIDS, 4 Monroe St.
 MINNEAPOLIS, 28 South 2d St.
 CLEVELAND, 176 Superior St.

U.S. SALESROOMS:
 SAN FRANCISCO, 17 Main St.
 ATLANTA, 16 Decatur St.
 DETROIT, 16-24 Woodward Ave.
 BALTIMORE, 12 N. Charles St.
 BUFFALO, 124-128 Washington St.
 NEW ORLEANS, 8-12 N. Peters St.
 KANSAS CITY, 1311 and 1313 W. 12th St.
 ST. LOUIS, 616 Locust St.

EUROPEAN BRANCH :—HAMBURG, Ger., Pickhuben 5 (Freihafengebiet).

VULCANIZED
 FABRICS
 FOR ALL PURPOSES.
 Belting and Hose
 FOR ALL PURPOSES.
 TEST HOSE.



FOR ALL PURPOSES

WHEELS

Safe, Cool
 are more
 Hence
 er.

The Dominion Wire Rope Co.,
MONTREAL,
—MANUFACTURERS OF—



For Hoisting, Mining, Inclines, Transmission of Power,
Towing, Ship Riggings, Guys, etc.,

—ALSO—

Lang's Patent Wire Rope for Transmission and Colliery
Purposes.

JAMES COOPER, AGENT.

THE
WELLS LIGHT

Wallwork & Wells' Patents.

A Soft White, Portable
Light of Great Brilliance
and Power.

INVALUABLE FOR

Engineers,
Iron Founders,
Boiler Makers,
Rolling Mills,
Railways,
Track Laying,
Tunnelling,
Bridge Building.

FOR

Mines, Collieries,
Coal Wharves, &c.

Two sizes carried in
stock—No. 1, 800.
No. 3, 2,000 Candle
Power.

JAS. COOPER.

Manufacturer,

204 St. James St., MONTREAL.



James Cooper,

IMPORTER OF

**Steel Rails, Fish Plates,
Track Bolts, Spikes
etc., etc.**

AGENT FOR

CHAS. CAMEL & Co., Ltd., Cyclops Steel and
Iron Works, Sheffield, England, Steel Rails.
JOHN HENRY ANDREW & Co., Toledo Steel
Works, Sheffield, England. Rock Drilling
and Tool Steels.

INGERSOLL ROCK DRILL CO., manufacturers of
Rock Drills, Air Compressors and General
Mining and Quarrying Machinery.

THE WELLS' LIGHT, a portable light of great
brilliance and power, for Mining and Engi-
neering purposes.

ONTARIO WIRE FENCING Co., Woven Wire
Fencing.

DOMINION WIRE ROPE Co., Wire Rope for
Hoisting, Transmission of Power, Ships'
Rigging, Guys, etc.

PATENT ELBOW Co., manufacturers of One-
Piece Elbows.

204 ST. JAMES STREET,

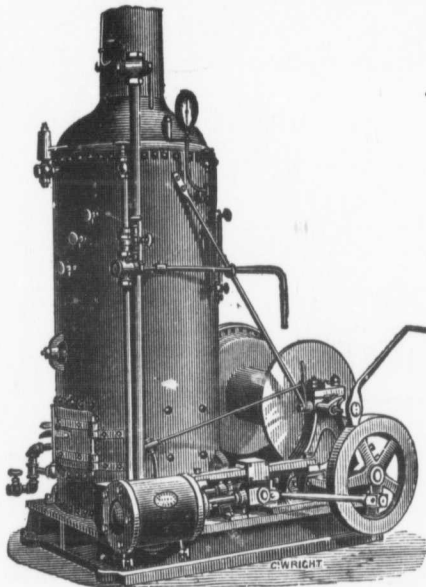
MONTREAL.

THE CANADIAN MINING MANUAL.

LIDGERWOOD MAN'F'G CO

96 Liberty St., NEW YORK, U.S.A.

34 AND 36 W. MONROE ST., CHICAGO, 197 TO 203 CONGRESS ST.,
BOSTON, 1 TO 7 N. FIRST ST., PORTLAND, OREGON.



Largest Manufacturers in the
United States of

Hoisting Machinery

OF EVERY DESCRIPTION FOR
Mines, Tunnel Work, Con-
tractors and General
Hoisting Purposes.

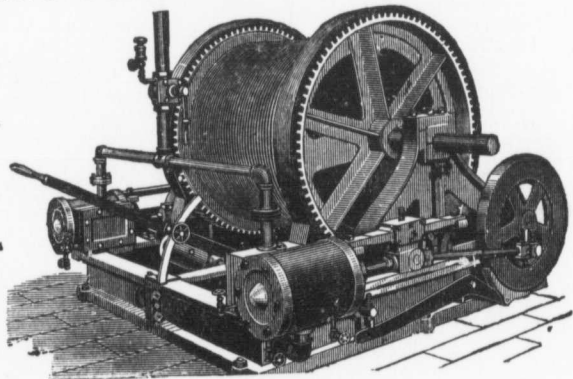


HOISTING ENGINES

FOR MINING PURPOSES. A SPECIALTY.

300 Styles
and Sizes.
Over 6,500
in Use.

SEND FOR CATAL GUE.





I. MATHESON & CO

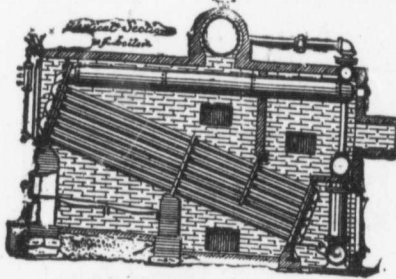
ENGINES, *
* BOILERS,
QUARTZ CRUSHING *
* MILLS, *
WINDING GEAR, *
PUMPING M'CHY *
STEEL SHOES & DIES. *
WRITE FOR PRICES.

ENGINEERS
AND
BOILER MAKERS

NEW GLASGOW
NOVA SCOTIA

THE BEST PLACE IN CANADA * FOR *
GOLD MINING MACHINERY



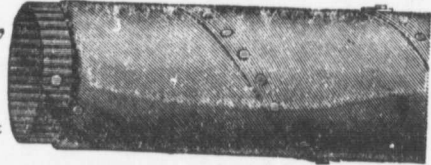
ROOT'S WATER TUBE STEAM BOILER.**SAFE, ECONOMICAL, DURABLE.**

Specially Adapted
for the Mining Regions,
as it is Sectional and no
Part Weighs more than can
be easily Transported on
the Backs of Mules
over a Rough and
Mountainous
Country.

SPIRAL RIVETED PIPE

FOR

Hydraulic Mining, Water Works,
Ranch and Railroad
Water Supply.



From 2 to 24 inches in diameter, and 1 foot
to 25 feet in length.

ABENDROTH & ROOT M'FG Co., 28 Cliff St., New York. U.S.A.
U.S. Branches:--Boston, Philadelphia, Chicago, Cincinnati, New Orleans,
Rochester, Dallas.

FIRE FELT

is a New **NON-CONDUCTING** material,
made into sections to fit any size of
pipe, and into rolls and sheets for
large surfaces. It is a flexible, felt-
like fabric, made of Pure **ASBESTOS**.

It has been demonstrated by the U.S. Naval Engineer and
others to be superior to hair-felt as a non-conductor, and
is indestructible by heat.

Covering your
Steam or Hot
Air Pipes will
save greatly in
Fuel, and give
Dry Steam at
long distances.



THE CHALMERS - SPENCE CO.,
59 AND 61 LIBERTY ST., NEW YORK.

U.S. BRANCHES:--Boston, Philadelphia, Chicago, Pitts-
burgh, St. Louis, U.S.A.



HAMILTON - POWDER - CO.,

MANUFACTURE MINING, BLASTING, MILITARY AND SPORTING

Gunpowder, - Dynamite, - Dualine,

— AND THE NEW —

ECLIPSE MINING POWDER.


DOMINION AGENTS FOR


Safety Fuse, Electric Blasting Apparatus, &c.

OFFICE:—

103 St. FRANCOIS XAVIER ST.,

MONTREAL.


Branch Offices and Magazines at all Chief Distributing Points in Canada.

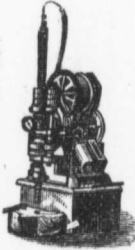


THE
M. C. BULLOCK M'FG CO.,
CHICAGO, U.S.A.

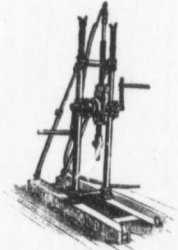
SPECIALTIES :

The Bullock Improved Diamond Drills

Adapted to Prospecting for all kinds of Minerals, to any required depth, at any desired angle from surface or underground. The only Drills in the World capable of giving an absolutely correct and reliable record of each and every stratum penetrated. Eighteen different styles and sizes of Drills for either Steam, Air, Horse or Hand-power.



"CHAMPION,"
1,200 ft., 1 3/4 in. hole,
1 3-16 in. core.



"BRAVO HAND DRILL,"
1 3/4 in. hole, 1 3-16 in.
core, 200 ft.

LANE'S PATENT BAND FRICTION HOISTS.

Single and Double Portable; First Motion and Geared; Standard Drums; Winze and Exploring Hoists; Wire Rope Haulage.

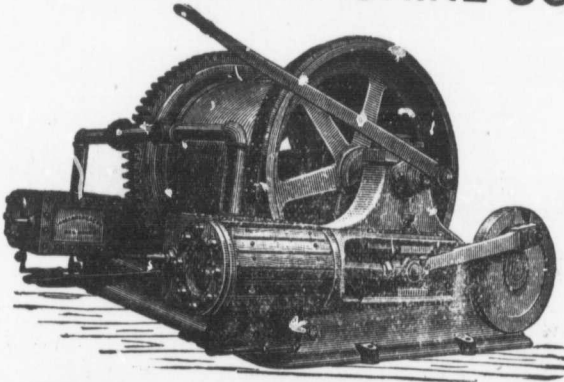
MURPHY'S CHAMPION VENTILATING FANS, FOR MINES AND BUILDINGS.

Bullock Improved CORLISS ENGINES AND SLIDE VALVE ENGINES.
Boilers, Pumps, &c., Quarrying Machinery, Air Compressors, Channelors, &c., &c.

PLEASE WRITE FOR CIRCULARS.

M. C. BULLOCK M'fg Co., 1170 West Lake St., Chicago, U.S.A.

JENCKES MACHINE COMPANY,



O O O O O

BUILDERS OF

Hoisting
Engines for
every Duty.

O O O O O

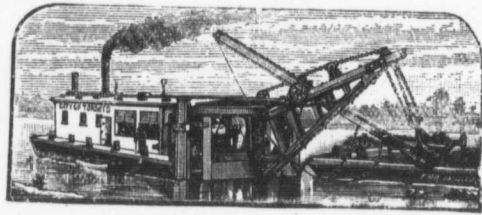
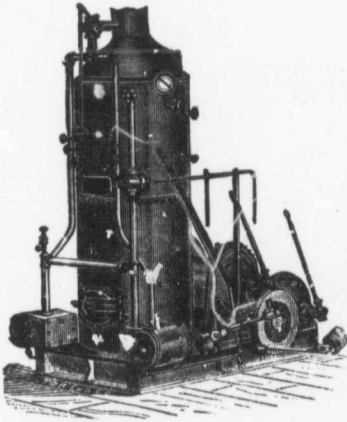
MINING MACHINERY AND GENERAL IRON WORK.
COMPLETE MINING PLANTS A SPECIALTY.

SELLING AGENTS FOR THE CANADIAN RAND DRILL CO.

SHERBROOKE, - QUE., CAN.

M. Beatty & Sons,

MANUFACTURERS OF



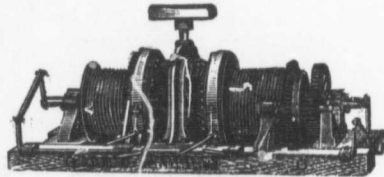
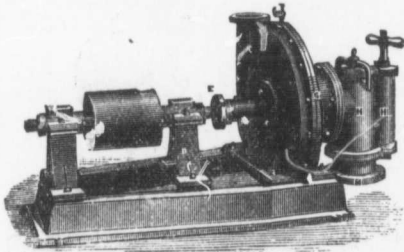
Dredges, Derricks and Steam Shovels.

HOISTING ENGINES AND HORSE POWER HOISTERS

(With either Clutch or Patent Friction Drums),

For Earth or Rock Work, Quarrying & laying Stones, Mining,
Pile Driving, Unloading Coal, Iron Ore, &c.

STONE DERRICK IRONS.



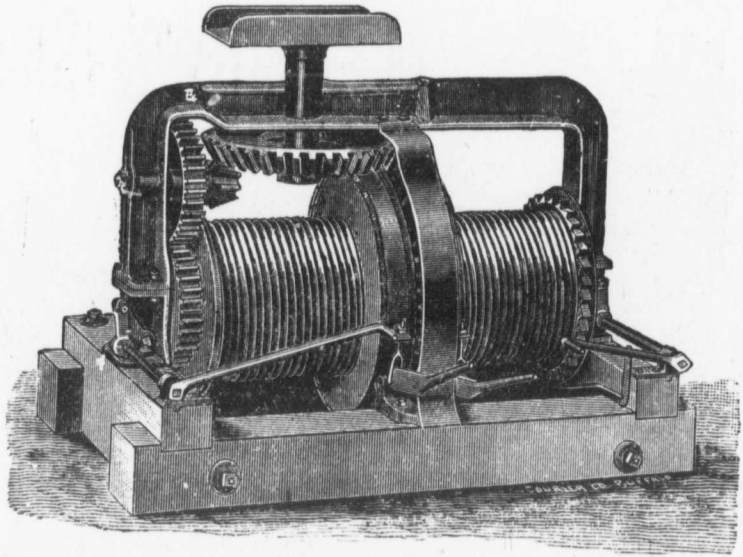
CENTRIFUCAL PUMPS

For Contractors, Quarries, Dry Docks, Wrecking and
Fire Purposes, Brewers, Distillers, Tanners,
Paper Makers, &c., &c., &c.

— ALSO —

Other Machinery for Contractors' and Builders' use.

WELLAND, ONTARIO, CAN.



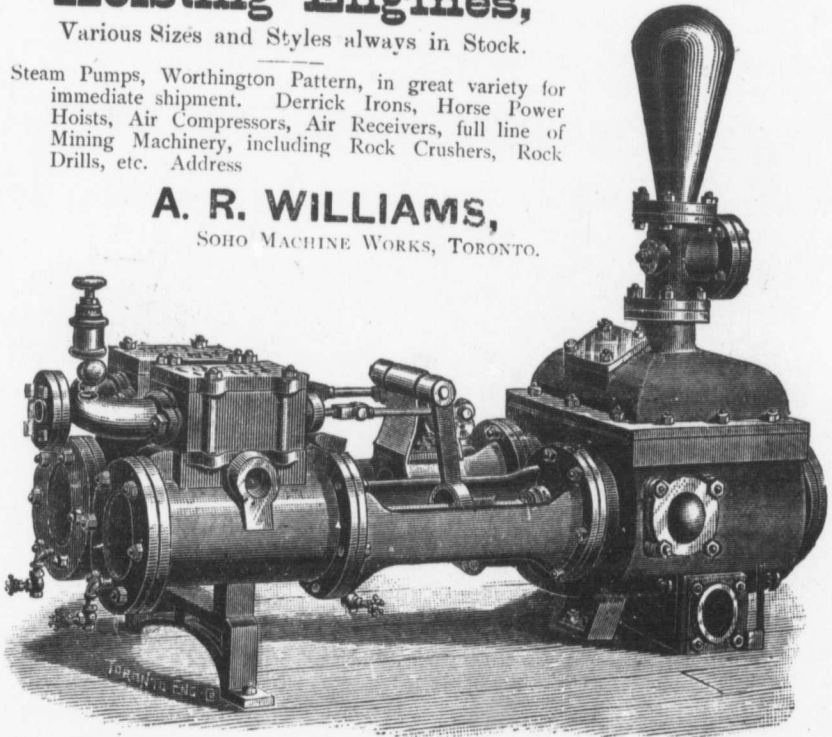
Hoisting Engines,

Various Sizes and Styles always in Stock.

Steam Pumps, Worthington Pattern, in great variety for immediate shipment. Derrick Irons, Horse Power Hoists, Air Compressors, Air Receivers, full line of Mining Machinery, including Rock Crushers, Rock Drills, etc. Address

A. R. WILLIAMS,

SOHO MACHINE WORKS, TORONTO.



RICE, LEWIS & SON,
(LIMITED).



TOOLS, MACHINERY & MINING SUPPLIES.

IRON, STEEL, PIPE, VALVES, FITTINGS, ROPE, CHAINS,
RAILS, TOOLS, ETC.

33 King Street East, - TORONTO.

Canadian Rubber Company

MONTREAL AND TORONTO.

CAPITAL, - - \$2,000,000.

A. ALLAN, Pres. J. O. GRAVEL, Sec.-Treas. F. SCHOLÉS, Man. Dir.

MANUFACTURERS OF

RUBBER SHOES AND FELT BOOTS.

OUR RUBBER BELTING IS UNEQUALLED IN AMERICA. It is specially adapted for Saw Mills, Elevators, etc., where great strength is required.

We manufacture all kinds of Rubber Hose, embracing Conducting, Hydrant, Engine, Suction, Steam and Petroleum Oil Hose.

Cotton Rubber Lined Mill Hose, all sizes.

Rubber Packings, Rubber Carriage Cloths, Rubber Horse Clothing, Men's dull finish Sheetting and Firemen's double coated Coats with snaps.

Mould Goods of every description, Hard Rubber Goods for mechanical purposes.

Sole Agents and Manufacturers of the Forsyth Patent Seamless Rubber Belting for the Dominion of Canada.

Head Offices and Factory,
Montreal,
J. I. MCGILL, Manager.

Western Branch
Cor. Front & Yonge Sts., Toronto.
J. H. WALKER, Manager.

AUSTEN BROS.,

Railway,

Colliery and

Gold Miners'

Supplies.

No. 124 Hollis Street, Halifax, N.S.

 ALL GOODS AT MANUFACTURERS' PRICES.

J. T. DONALD, M.A.,

Analytical Chemist and Assayer,

124 ST. JAMES STREET, - MONTREAL

Analyses and Assays of every description. Manufacturing processes practically tested. Laboratory instruction in Chemistry, Assaying and Mineralogy. Terms on application.

H. R. IVES & CO.,

Hardware Manufacturers and Founders, - Queen Street, Montreal.

STOVES, Trade Mark "Buffalo"	PORTABLE FORGES.	MONTREAL SMELTING CO'S	CASTINGS Of Every Description to Order.
IRON BEDSTEADS For Miners' Use.	BLACKSMITHS' DRILLS.	BABBIT METAL.	SOIL PIPE.

Canadian Rand Drill COMPANY, SHERBROOKE, - QUE.

Organized for the manufacture of Rock Drills, Air Compressors and Supplies of a better grade than those heretofore made in Canada.

Duplex Air Compressors for the most economical use of fuel a specialty.

Straight Line Compressors securing great economy in first cost.

Water Power Compressors of a new and superior design and of a low cost.

Rock Drills of the latest pattern and proportions ; quality and efficiency guaranteed.

Construction in the immediate charge of the engineer of the New York Company.

JENCKES MACHINE Co.,

SELLING AGENTS FOR CANADA.

SHERBROOKE, - QUE.

GOLD MINING SUPPLIES,

Explosives, Fuse Detonators, American and English Drill
and Hammer Steel, Quicksilver, Bar and Bolt Iron,
Steel Wire Hoisting Rope, Hemp and
Manilla Rope, Rubber and Leather
Belting, Rubber Hose, Miner's
Candles, Oils and Lamps,
Miner's Tools, Black-
smith's Tools,

AND EVERY REQUISITE FOR THE GOLD MINER.

Enquiries by Mail will Receive Prompt Attention.

H. H. FULLER & CO.,

41 to 45 Upper Water St., - - HALIFAX, N.S.

TELEGRAM ADDRESS: FORNAJO, LONDON.

Specialist in Nica : Miner's Agent.

ESTABLISHED MARCH, 1858,

RICHARD BAKER

RAW PRODUCE AGENT,

Commercial Sale Rooms, Mincing Lane, and

6 & 7 Cross Lane, London, E.C.

Representative, A. O. Schoonmaker,
158 William street, New York.

Advances made on consignments.

John Stewart,

MINING ENGINEER,

181 Bay street, Ottawa, Ont.

Reports made on Mineral Properties.

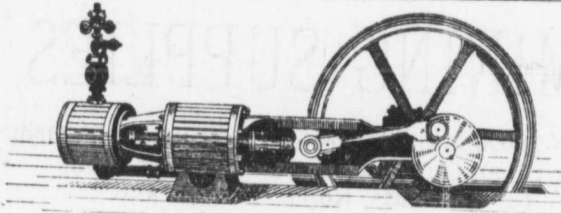
Mines and Mineral Lands bought and
sold.

GEMMILL & MAY,

Barristers, Solicitors, Etc.,

72 Sparks Street, - OTTAWA.

Give Special Attention to the Transaction of Agency
Business with the various Departments of the
Dominion Government, and to the Procuring
of Charters of Incorporation, and Private
Acts from Parliament.



Engines,
Hoisting Plants,
Gold Mining,
—AND—
Mill Machinery.

W. W. HOWELL & CO.

WRITE FOR PRICES.

HALIFAX, N.S.

JOHN J. GARTSHORE,
Toronto.

NEW AND SECOND HAND

**Rails and Cars for
Tramways.**

Some good cars now on hand for sale cheap.

T. D. LEYARD,

Dealer in Mineral Lands

Room 5.—57 Colborne St., TORONTO.

Will buy undeveloped Iron Ore and other Mineral Properties.

WANTED.—Deposits of Magnetic Iron Ore, Red Hematite, Brown Hematite, Galena, Iron and Copper Pyrites, Mica, Soapstone, Marble, Gypsum, Baryta. Samples can be sent by Sample Post for 1 cent for 4 oz., up to 24 oz. in weight.

Information regarding mines cheerfully given. Correspondence solicited. Crown Land Business attended to.



CHEMICAL AND ASSAY APPARATUS

AGENTS FOR THE DOMINION FOR THE

Morgan Crucible Company, Battersea, England.

AND FOR THE

**Analytical and Assay Balances and Weights of
Beckers Sons, Rotterdam.**

Microscopes of E. Leitz, Wetzler. Kavalier's Bohemian Glassware. Royal Berlin and Merssen Porcelain. Platinum Wire Foil, Crucibles and Dishes, Swedish Filter Paper, Chemically Pure Reagents and Volumetric Solutions.



An Illustrated Priced Catalogue on application.

LYMAN SONS & CO.,

380, 382, 384 and 386 St. James Street. - - MONTREAL.

ORFORD COPPER CO., COPPER SMELTERS.

Works at Constable's Hook, N. J., opposite New Brighton, Staten Island. Copper and Nickel Ore, Mattes or Bullion Purchased. Advances made on Consignments for Refining and Sale. Specialty made of Silver-Bearing Ores and Mattes.

SELL INGOT AND CAKE COPPER.

PRESIDENT; ROBT. M. THOMPSON,
OFFICE, 37 to 39 WALL STREET. - NEW YORK.

GOLD & COAL MINING SUPPLIES

Every requisite in HARDWARE for the Miner, Contractor and Quarryman at lowest prices.

W. B. REYNOLDS & CO.,
233, 240, 241 Lower Water Street,
HALIFAX, N. S.

DARTMOUTH IRON FOUNDRY.

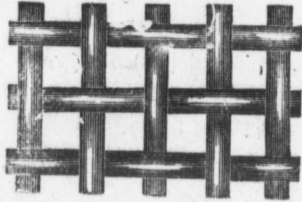
We have Re-opened the IRON FOUNDRY formerly occupied by W. S. SYMONDS & Co., and are now prepared to Supply all **STOVES, &c.**, Manufactured by the Late Firm; also **HEAVY AND LIGHT CASTINGS.**

‡ Special Mixture for Stamper Shoes and Dies. ‡

A. N. BAYNE & SON,
18, 20 DUKE STREET, - DARTMOUTH, N. S.

WIRE ROPE

FOR MINING, HOISTING DERRICKS, ETC.



Strong Wire Cloth and Screens

FOR MINING, ETC., MANUFACTURED BY

The B. Greening Wire Co., Ltd.

HAMILTON, ONT.

Macdonald & Co., Limited,

MANUFACTURERS AND DEALERS IN

**Pumping Machinery, Iron Pipes, Fittings, etc.,
for Miners' Use.**

Call or write us for Prices.

HALIFAX, N.S.

JOHNE E. HARDMAN, S.B.

MINING ENGINEER,

OLDHAM, NOVA SCOTIA.

Can be consulted on all matters pertaining to the profession.

The development and management of Gold Properties a speciality.

W. Bredmeyer, Ph. Dr.

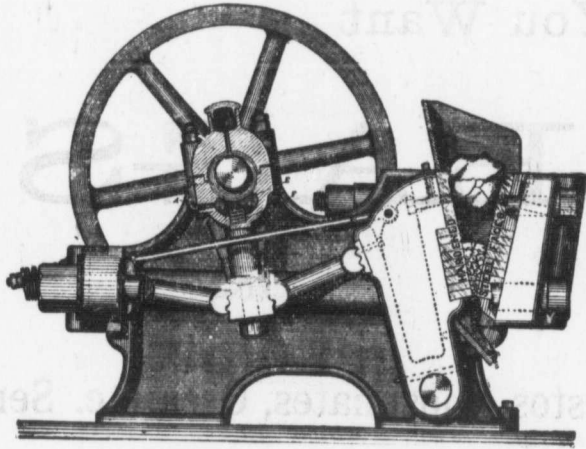
(Late Partner of John McVicker),

Mining Engineer, Provincial and United States
Surveyor and Assayer, Masonic Temple
Block, Vancouver, B.C.

Reliable Reports, Underground Surveys and
Maps of Mines executed at low rates. Assays
made on all kinds of minerals, gold and silver bars.
Thirty years' experience in mining in Asia, Europe
and United States of America. Speaks ten languages.
Assays from a distance promptly attended to. Address Vancouver, B.C.

⚡ All business strictly cash in advance.

**KROM'S
STANDARD ORE BREAKER.**



**KROM'S
STANDARD ORE BREAKER.**

Krom's Perfect Standard Steel Rolls and Ore Breakers,

For Crushing and Pulverizing Ores. Ore Feeders, Dry Kilns,
Pneumatic Jigs. Plans for Crushing, Leaching and
Concentrating Mills. Send for Circulars.

S. R. KROM, - - 151 CEDAR ST., NEW YORK.

ESTABLISHED 1876.

**A. R. CHISHOLM & CO.,
BANKERS AND BROKERS,
61 Broadway, New York.**

INVESTMENT - INDUSTRIAL - STOCKS.

*Sugar Trust, Lead Trust, Chicago Gas Trust, Cotton
Oil, &c., and all other Securities that are dealt in
on New York, Philadelphia, San Francisco or
Boston Exchanges, Bought and Sold for
Investment or on Margin.*

WEEKLY CIRCULAR FREE.

If You Want

BAGS

FOR PACKING

Asbestos, Phosphates, Ores, etc. Send to
us for Samples and Prices.

Every quality and size in stock.

Specially strong sewing for heavy materials.

Lowest prices compatible with good work.

We now supply most of the Mining Companies, and those who
have not bought from us would find it to their advantage to do so.

The Canada Jute Co., Ltd.

17, 19 and 21 St. Martin Street,

MONTREAL.

ESTABLISHED 1882.

C. H. NICHOLS & Co.,

Capelton Chemical Works,

Capelton Fertilizer Works,

Capelton Smelting Works, Albert Mines.

CAPELTON, P.Q., CANADA,

Acids, Fertilizers, Chemicals.

Send For Quotations.

Copper Ores Purchased.

Correspondence should be addressed to the main office, 68
William Street, New York.

ESTABLISHED 1850.

J. & H. BERGE,

P.O. Box 401.

Importers and Manufacturers of

ASSAYERS AND CHEMISTS' SUPPLIES, ETC.

Crucibles of all kinds, Chemical Porcelain, Bohemian

Glassware, Chemicals and Reagents.

SOLE AGENTS FOR

BOULTER'S SUPERIOR MUFFLES.

Manufacturers of

HIBBS' IMPROVED ASSAY FURNACES.

95 JOHN AND 30 GOLD STREETS,

NEW YORK.

Large Illustrated Catalogue sent on receipt of 25 cents.

W. DEL. BENEDICT, E.M.

(GRADUATE OF THE SCHOOL OF MINES, NEW YORK.)

MEMBER of the AMERICAN INSTITUTE of MINING ENGINEERS.

Mining Engineer & Metallurgist.

REPORTS ON MINES, MINERAL LANDS AND METALLURGICAL PROCESSES.

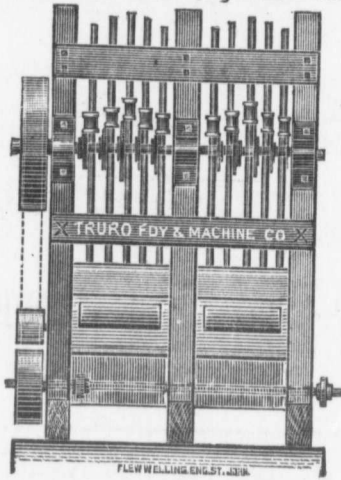
ANALYSES AND ASSAYS OF ALL KINDS WILL RECEIVE PROMPT AND CAREFUL
ATTENTION.

PHOSPHATE A SPECIALTY.

32 Liberty Street, - NEW YORK.

TRURO FOUNDRY AND MACHINE CO.

TRURO, N.S.



Engineers & Founders

OUR SPECIALTIES

— ARE —

Gold Mining Machinery

Of every kind, with latest Western Improvements.

ROTARY SAW MILLS

In Latest Styles.

ALSO MANUFACTURERS OF

BOILERS & ENGINES

Iron, Bridges, Stoves,
SHIP, MILL and GENERAL
CASTINGS.



G. CLISH,
Manager.

D. McDONALD,
Supt.

S. R. TUPPER,
Sec'y and Treas



Province of Nova Scotia.

LEASES FOR MINES OF

Gold, Silver, Coal, Iron, Copper, Lead, Tin

— AND —

PRECIOUS STONES.

TITLES GIVEN DIRECT FROM THE CROWN, ROYALTIES
AND RENTALS MODERATE.

GOLD AND SILVER.

Under the provisions of chap. 7. Revised Statutes, of Mines and Minerals, Licenses are issued for prospecting Gold and Silver for a term of six months, which can be extended by renewal for another six months. Mines of Gold and Silver are laid off in areas of 150 by 250 feet, any number of which up to one hundred can be included in one License, provided that the length of the block does not exceed twice its width. Up to ten areas the cost is 50 cents per area, for every area in addition in same application 25 cents. Cost of renewal one half the original fees. Leases of any number of areas are granted for a term of 21 years at \$2.00 per area. These leases are forfeitable if not worked, but advantage can be taken of a recent Act by which on payment of 50 cents annually for each area contained in the lease it becomes non-forfeitable if the labor be not performed.

Licenses are issued to owners of quartz crushing mills, who are required to pay Royalty on all the Gold they extract at the rate of two per cent. on smelted Gold valued at \$19.00 an ounce, and on smelted Gold valued at \$18.00 an ounce.

Applications for Licenses or Leases are receivable at the office of the Commissioner of Public Works and Mines each week day from 10 a.m. to 4 p.m., except Saturday, when the hours are from 10 to 1. Licenses are issued in the order of application according to priority. If a person discovers Gold in any part of the Province he may stake out the boundaries of the area he desires to obtain, and this gives him one week and twenty four hours for every 15 miles from Halifax in which to make application at the Department for his ground.

MINES OTHER THAN GOLD AND SILVER.

Licenses to search for twelve months are issued, at a cost of twenty dollars, for Minerals other than Gold and Silver, out of which one square mile can be selected for mining under lease. These leases are for four renewable terms of twenty years each. The cost for the first year is fifty dollars, and an annual rental of thirty dollars secures each lease from liability to forfeiture for non-working.

All rentals are refunded if afterwards the areas are worked and pay royalties. All titles, transfers, etc., of minerals are registered by the Mines Department free of charge, and provision is made for lessees and licensees whereby they can acquire promptly either by arrangement with the owner or by arbitration all land required for their mining works.

The Government as a security for the payment of royalties makes the royalties first lien on the plant and fixtures of the mine.

The unusually generous conditions under which the Government of Nova Scotia grants its minerals have introduced many outside capitalists who have always stated that the Mining Laws of the Province were the best they had had experience of.

The royalties on the remaining minerals are:—Copper, four cents on every unit; Lead, two cents upon every unit; Iron, five cents on every ton; Tin and Precious Stones, five per cent.; Coal, $7\frac{1}{2}$ cents on every ton sold.

The Gold District of the Province extends along its entire Atlantic coast and varies in width from 10 to 40 miles, and embraces an area of over three thousand miles, and is traversed by good roads and accessible at all points by water. Coal is known in the counties of Cumberland, Colchester, Pictou and Antigonish, and at numerous points in the Island of Cape Breton. The ores of Iron, Copper, etc., are met at numerous points, and are being rapidly secured by miners and investors.

Copies of the Mining Law and any information can be had on application to

THE HON. C. E. CHURCH,
Commissioner Public Works and Mines,
HALIFAX, NOVA SCOTIA.



MINING REGULATIONS

TO GOVERN THE DISPOSAL OF

Dominion Lands Containing Minerals other than Coal, 1890.

THESE REGULATIONS shall be applicable to all Dominion Lands in Manitoba and the North-West Territories, containing gold, silver, cinnabar, lead, tin, copper, petroleum, iron or other mineral deposits of economic value, with the exception of coal.

Any person may explore vacant Dominion Lands not appropriated or reserved by Government for other purposes, and may search therein either by surface or subterranean prospecting for mineral deposits, with a view to obtaining under the Regulations a mining location for the same, but no mining location or mining claim shall be granted until the discovery of the vein, lode or deposit of mineral or metal within the limits of the location or claim.

QUARTZ MINING.

A location for mining, except for iron or petroleum, on veins, lodes or ledges of quartz or other rock in place shall not exceed 1500 feet in length and 600 feet in breadth. Its surface boundary shall be four straight lines, the opposite sides of which shall be parallel, except where prior locations may prevent, in which case it may be of such a shape as may be approved of by the Superintendent of Mines.

Any person having discovered a mineral deposit may obtain a mining location therefor, in the manner set forth in the Regulations which provide for the character of the staking out and the marks necessary to designate the location on the ground.

When the location has been marked conformably to the requirements of the Regulations the claimant shall within sixty days thereafter, file with the local agent in the Dominion Land Office for the district in which the location is situated, a declaration or oath setting forth the circumstances of his discovery, and describing, as nearly as may be, the locality and dimensions of the claim marked out by him as aforesaid; and shall, along with such declaration, pay to the said agent an entry fee of FIVE DOLLARS. The agent's receipt for such fee will be the claimant's authority to enter into possession of the location applied for.

At any time before the expiration of FIVE years from the date of his obtaining the agent's receipt it shall be open to the claimant to purchase the location on filing with the local agent proof that he has expended not less than FIVE HUNDRED DOLLARS in actual mining operations on the same; but the claimant is required, before the expiration of each of the five years, to prove that he has performed not less than ONE HUNDRED DOLLARS' worth of labor during the year in the actual development of his claim, and at the same time obtain a renewal of his location receipt, for which he is required to pay a fee of FIVE DOLLARS.

The price to be paid for a mining location shall be at the rate of FIVE DOLLARS PER ACRE, cash, and the sum of FIFTY DOLLARS extra for the survey of the same.

No more than one mining location shall be granted to any individual claimant upon the same lode or vein.

IRON AND PETROLEUM.

The Minister of the Interior may grant a location for the mining of iron or petroleum, not exceeding 160 acres in area, which shall be bounded by north and south and east and west lines astronomically, and its breadth shall equal its length. Provided that should any person making an application purporting to be for the purpose of mining iron or petroleum thus obtain, whether in good faith or fraudulently, possession of a valuable mineral deposit other than iron or petroleum, his right in such deposit shall be restricted to the area prescribed by the Regulations for other minerals and the rest of the location shall revert to the Crown for such disposition as the Minister may direct. The Regulations also provide for the manner in which stone quarries may be acquired.

PLACER MINING.

The Regulations laid down in respect to quartz mining shall be applicable to placer mining as far as they relate to entries, entry fees, assignments, marking of localities, agents' receipts, and generally where they can be applied.

The nature and size of placer mining claims are provided for in the Regulations, including bar, dry, bench, creek or hill diggings, and the RIGHTS AND DUTIES OF MINERS are fully set forth.

The Regulations apply also to

BED-ROCK FLUMES, DRAINAGE OF MINES AND DITCHES.

The GENERAL PROVISIONS of the Regulations include the interpretation of expressions used therein; how disputes shall be heard and adjudicated upon; under what circumstances miners shall be entitled to absent themselves from their locations or diggings, etc., etc.

THE SCHEDULE OF MINING REGULATIONS

Contains the *forms* to be observed in the drawing up of all documents such as:—
“Application and affidavit of discoverer of quartz mine.” “Receipt for fee paid by applicant for mining location.” “Receipt for fee on extension of time for purchase of a mining location.” “Patent of a mining location.” “Certificate of the assignment of a mining location.” “Application for grant for placer mining and affidavit of applicant.” “Grant for placer mining.” “Certificate of the assignment of a placer mining claim.” “Grant to a bed rock flume company.” “Grant for drainage.” “Grant of right to divert water and construct ditches.”

Since the publication, in 1884, of the Mining Regulations to govern the disposal of Dominion Mineral Lands the same have been carefully and thoroughly revised with a view to ensure ample protection to the public interests, and at the same time to encourage the prospector and miner in order that the mineral resources may be made valuable by development.

COPIES OF THE REGULATIONS MAY BE OBTAINED UPON APPLICATION TO THE DEPARTMENT OF THE INTERIOR.

A. M. BURGESS,

Deputy Minister of the Interior.

The Edison General Electric Co

Edison Building, Broad Street, New York City.

Electric Mining Machinery.

Increased Profits in Mining Result From the Reduction of cost of Power Used.

Over fifty thousand horse power of Electrical Apparatus sold by us for Electric Power Transmission since the first of January, 1890. Coal Mines equipped with all kinds of Mining Machinery and with Arc and Incandescent Lighting.

Address all communications to the nearest District Office, as below,

Canadian District Office,

Bank of Commerce Building, Toronto.

MAIN DISTRICT OFFICES:

Canadian District Office,	- - -	Bank of Commerce Building, Toronto, Can.
Central District,	- - -	Rialto Building, Chicago, Ill.
Eastern District,	- - -	Edison Building, Broad Street, New York.
New England District,	- - -	38 Pearl Street, Boston, Mass.
Pacific Coast District,	- - -	Edison Building, 112 Bush St., San Francisco, Cal.
Pacific Northwest District,	- - -	Fleischner Building, Portland, Ore.
Rocky Mountain District,	- - -	Masonic Building, Denver, Col.
Southern District,	- - -	Cotton Exchange, New Orleans, La.

THE
CANADIAN
MINING MANUAL,

FOR

1890-91,

BY

B. T. A. BELL

Editor of The Canadian Mining Review, etc.

CONTAINING PARTICULARS OF ALL CANADIAN MINING AND
QUARRYING COMPANIES, TOGETHER WITH A SERIES
OF ARTICLES ON PROMINENT INDUSTRIES,
AND A RESUME OF THE VARIOUS
JOINT STOCK COMPANIES
ACTS.

FIRST EDITION.

PRICE, POST FREE, THREE DOLLARS.

*Entered according to Act of the Parliament of Canada, in the year 1890, by
B. T. A. Bell at the Department of Agriculture.*

OTTAWA, ONT.
UNION CHAMBERS, 14 METCALFE STREET.
1890.

TN 26

A2

C2

Fol.

1890/91

14433

PREFACE.

THE CANADIAN MINING MANUAL is published in the hope that it may prove, in some measure at least, a handy and useful reference on many points concerning the Companies formed to acquire and work Canadian mines and quarries. A work of this kind, aiming to cover a wide field, and to embrace details not readily accessible, must necessarily be incomplete in its first edition, and the writer is conscious that the present unpretentious volume must simply form the groundwork upon which to build something more substantial in the future. It professes to be in the main but a compilation, the most liberal use having been made of every available authentic source of information. The writer has also been materially assisted by many kind friends, notably by Mr. John Hardman, S. B., Oldham, N. S.; Mr Archibald Blue, Toronto; Capt. Adams, Montreal; the Hon. John Robson, Minister of Mines, Victoria, B. C.; Mr. E. Gilpin, jr., Halifax; Mr. John Bowron, Gold Commissioner for Cariboo; Mr. J. A. Gemmill, Barrister-at-Law, Ottawa; and Mr. Walter R Skinner, Editor of the *Capitalist*, London, Eng.; to all of whom he would take this opportunity of returning his grateful acknowledgments. He would also return his best thanks to the secretaries and mine officials for their uniform courtesy in furnishing reports regarding their Companies. It is hoped to publish a second edition at an early date, when any errors or omissions, if such there be, in the present volume will be fully corrected.

UNION CHAMBERS,
14 Metcalfe Street, Ottawa, Ont.

CONTENTS

PREFACE
 CHAPTER I
 CHAPTER II
 CHAPTER III
 CHAPTER IV
 CHAPTER V
 CHAPTER VI
 CHAPTER VII
 CHAPTER VIII
 CHAPTER IX
 CHAPTER X
 CHAPTER XI
 CHAPTER XII
 CHAPTER XIII
 CHAPTER XIV
 CHAPTER XV
 CHAPTER XVI
 CHAPTER XVII
 CHAPTER XVIII
 CHAPTER XIX
 CHAPTER XX
 CHAPTER XXI
 CHAPTER XXII
 CHAPTER XXIII
 CHAPTER XXIV
 CHAPTER XXV
 CHAPTER XXVI
 CHAPTER XXVII
 CHAPTER XXVIII
 CHAPTER XXIX
 CHAPTER XXX
 APPENDIX
 INDEX

CONTENTS.

ARTICLES :	PAGE
Mining in Ontario.....	I
Canadian Phosphate Trade.....	11
Canadian Asbestos Industry	21
(From <i>The Canadian Mining Review</i> .)	
Our Gold Fields in Quebec.....	31
(From <i>The Canadian Mining Review</i> .)	
Gold Mining as an Industry in Nova Scotia.....	39
Coal and Iron in Nova Scotia.....	46

MANUAL :

The Incorporated and Private Mining and Quarrying Companies of Canada51 to 178
--	------------

INDEX TO COMPANIES	xxx1
--------------------------	------

JOINT STOCK COMPANIES ACTS :

Dominion of Canada.....	180
Ontario.....	188
Quebec	189
New Brunswick.....	191
Nova Scotia.....	191
Manitoba	194
North-West Territories.....	195
British Columbia.....	197

MINES, MACHINERY AND SUPPLIES :

Index to Advertisements	xxxix
-------------------------------	-------

THE
Newark Smelting and Refining Works,

EDWARD BALBACH & SON, Proprietors,

NEWARK, NEW JERSEY.

SMELTERS AND REFINERS OF

Cold, Silver, Lead and Copper Ores, Bullion and Argentiferous
Copper Matte

RECEIVED ON CONSIGNMENT OR PURCHASE.

SMELTING AND REFINING WORKS, }
ELECTROLYTIC COPPER WORKS, } NEWARK, N. J.

Assayers, Metallurgists and Engineers.

LEDOUX & CO.,

9 CLIFF STREET, - - NEW YORK CITY.

Sample and Assay Ores, Metals and Furnace Products
of all kinds.

☞ Test by Working Processes all Classes of Ores, and
Determine the best method of treatment. ☞

Analyses of Chemicals, Waters and all Industrial Products.

ALL SMELTERS PURCHASE ORES ON OUR ASSAY.

INDEX TO COMPANIES.

	PAGE.
Alabama Hydraulic Gold Mining Co.....	51
Alberta Railway and Coal Co.....	51
Anglo-Canadian Phosphate Co. (Ltd).....	52
Anglo-Continental Guano Works Co.	52
Asbestos Mining and Manufacturing Co. of Canada	53
Austin Mining Co. (Ltd).....	53
Bay of Fundy Red Granite Co.....	53
Beaver Asbestos Co. (Ltd).....	54
Beaver Mining and Milling Co.....	54
Bell's Asbestos Co. (Ltd).....	55
Bonanza Mining Co.....	55
Boston Coal Mining Co.....	56
Bras d'Or Lime Co. (Ltd).....	56
Bristol Iron Co., (Ltd).....	56
British Columbia Milling and Mining Co., (Ltd)	57
British Columbia Pottery and Terra Cotta Co.....	58
British Columbia Smelting Co., (Ltd).....	58
Bruce Land and Mining Co., (Ltd).....	59
Brunswick Manganese Co.....	59
Buckingham Brick and Tile Co.....	59
Caledonia Mining Co.....	60
Cambrian Coal Co., (Ltd).....	60
Canada Gold Co.....	60
Canada North-West Coal and Lumber Syndicate, (Ltd).....	61
Canadian Pacific Prospecting and Mining Co., (Ltd).....	61
Canadian Phosphate Co., (Ltd)	62
Canadian Superphosphate Co.....	62
Central Rawdon Mining Co. (Ltd).....	63
Cobourg, Blairton and Marmora Railway and Mining Co.....	63
Colchester Coal Mining Co. (Ltd).....	63
Coldstream Mining Co.....	64

Coleraine Lumbering and Mining Co.....	64
Consumers' Oil Co.....	64
Cottonwood Gold Mining Co. (Ltd).....	65
Crown Point Mining Co.....	65
Crow's Bar Mining Co. (Ltd).....	66
Danville Slate Co.....	66
Dominion Lime Co.....	67
Dominion Mineral Co.....	67
Dominion Phosphate Co. (Ltd).....	68
Donald Gold Mining Co. (Ltd).....	68
Douglas Coal Mining Co.....	68
Douglas Mining Co.....	69
Dufferin Gold Mining Co.....	69
Eastern Development Co. (Ltd.).....	69
East River Coal Co.....	71
East River Gold Mining Co.....	71
East Templeton District Phosphate Mining Syndicate (Ltd.).....	71
Excelsior Copper Co. (Ltd.).....	72
Forrest Rose & St. George Hydraulic Gold Mining Co.....	73
Foxton Phosphate Mining Co. (Ltd.).....	73
Fraser River Gold Gravels Syndicate.....	73
Frontenac Phosphate Co. (Ltd.).....	74
Galway Mining Co. (Ltd.).....	74
General Mining Association (Ltd.) of London, Eng.....	74
George Heenan Mining Co.....	75
G. H. Nichols & Co.....	76
Glace Bay Mining Co.....	76
Gold Mining Association of Canada (Ltd.).....	77
Gold Mining Association of Nova Scotia (Ltd.).....	77
Gowrie Coal Mining Co.....	78
Grand River Plaster Co.....	78
Halifax Mining and Prospecting Co.....	79
Hants Mineral Oil & Mining Co. (Ltd.).....	79
Heron Bay Mining Co.....	79
Heywood Hydraulic Gold Mining Co.....	79
H. H. Vivian & Co. (Ltd.).....	80
Highland Mining Co.....	80
Home Stake Mining and Milling Co. of Manitoba and the North-West (Ltd.).....	81
Hungerford Marble Co (Ltd).....	81
Invincible Mining Co. (Ltd.).....	82

Joggins Coal Mining Association.....	82
Johnson's Asbestos Co. (Ltd.)	82
Kempt Gold Mining Co.....	83
King Bros.....	83
Kingston Phosphate Mining Co.	83
Kingston Valley Lead Mining Co. (Ltd.).....	84
Kootenay No. 1 Mining Co. (Ltd.).....	84
Kootenay Smelting and Trading Syndicate (Ltd.).....	84
Kootenay Valleys Co. (Ltd.).....	85
Lake Lode Mining Co.....	85
Lake of the Woods Mining and Milling Co.....	86
Lake Superior Mineral Land Development Co.....	86
Lake Superior Mining Co. (Ltd.)	86
Lake Superior Native Copper Co. (Ltd.).....	87
La Société Canadienne d'Etudes Mineries.....	87
Laura Hydraulic Mining Co. (Ltd.).....	87
Little Rapids Mining Co.....	88
Low Point Barasois and Lingam Mining Co (Ltd).....	88
MacLaurin Phosphate Mining Syndicate, (Ltd).....	89
McMillan, Kittridge & Co.....	90
Megantic Mining Co., (Ltd).....	90
Mining Development Co. of North America	90
Montreal Manganese Mining Co., (Ltd).....	91
Mooseland Gold Mining Co., (Ltd).....	91
Murillo Silver Mine, (Ltd)	91
Nelson Island Granite Co., (Ltd).....	92
New Brunswick Silver and Gold Mining Co	92
New Egerton Gold Mining Co.....	92
Newfoundland Colonization and Mining Co., (Ltd)	93
New Glasgow Coal, Iron and Railway Co., (Ltd).....	93
New Rockland Slate Co	94
Nicola Milling and Mining Co., (Ltd).....	94
North American Phosphate Co.	95
Northup Mining Co., (Ltd).....	95
North-Western Coal and Navigation Co., (Ltd).....	96
North-Western Gold and Silver Mining Co.....	96
Nova Scotia Coal and Railway Co. (Ltd).....	96
Nova Scotia Midland Railway, Coal and Iron Co. (Ltd).....	97
Oldham Gold Co.....	97
Ontario Mining Co. (Ltd).....	97

Ontario Natural Gas and Fuel Co.....	98
Ormstown Brick and Terra Cotta Co. (Ltd).....	98
Parker Douglas Co.....	
Peninsula Gold Mining Co. (Ltd).....	99
Petrolia Crude Oil Tanking Co.....	99
Petrolia Oil Co.....	99
Philadelphia Gold Mining Co.....	100
Phoenix Coal Co. (Ltd).....	100
Phoenix Land and Development Co. (Ltd).....	101
Pike Lake Mica Mining Co.....	101
Pleasant River Gold Mining Co.....	101
Portland Phosphate Mining Co.....	101
Premier Oil Co.....	102
Producers' Tanking Co.....	102
Queen's County Mining Co.....	102
Quesnelle Quartz Mining Co. (Ltd).....	103
Rawdon Antimony Mining Co. (Ltd).....	103
Red Deer Valley Railway and Coal Co.....	103
Revelstoke Mining Co. (Ltd).....	104
Rossignol Mining Co.....	104
Saskatchewan Railway and Mining Co.....	105
Scottish Canadian Asbestos Co.....	105
Sebastopol Phosphate Syndicate Co. (Ltd).....	105
Selkirk Mining and Smelting Co. (Ltd).....	105
Shebandowan Mining Co.....	106
Sherbrooke Marble Co.....	106
Shuniah Weachu Mine Co. (Ltd).....	106
Silver Centre Mining Co. of Ontario (Ltd).....	107
Silver Glance Co. (Ltd).....	107
Silver Star Mining Co.....	108
Silver Wolverine Co. (Ltd).....	108
South Fork Hydraulic Mining Co. (Ltd).....	109
South Fork of Quesnelle Hydraulic Mining Co.....	109
Standard Asbestos Co. (Ltd).....	109
Stanley Coal Co.....	110
Stanley Gold Mining Co. (Ltd).....	110
Steadman Quartz Mining Co. (Ltd).....	111
Steel Co. of Canada (Ltd).....	111
Sugar Creek Hydraulic Mining Co. (Ltd).....	111
Templeton and North Ottawa Mining Co. (Ltd).....	111
Templeton Phosphate Railway Co.....	112

98	Texada Gold and Silver Mining Co. (Ltd).....	112
98		
	The Acadia Coal Co. (Ltd).....	113
99	The Alabastine Co. (Ltd).....	114
99	The Algoma Mines' Co.....	115
99	The Alice and Emma Consolidated Gold Quartz Mining Co.....	115
00	The American Asbestos Co.....	116
00	The Anglo-American Mining Co.....	116
01	The Anglo-Canadian Asbestos Co. (Ltd).....	117
01	The Anthracite and Bituminous Coal Co. (Ltd).....	117
01		
01	The Badger Silver Mining Co.....	117
02	The Battye Freestone Co. (Ltd).....	118
02	The Beaconsfield Copper Mining Co. (Ltd).....	118
02	The Bedford Mining Co.....	119
02	The Black Diamond Coal Co. (Ltd).....	119
03	The Black Jack Quartz Mining Co. (Ltd).....	119
03	The Blue Bell Mining Co. (Ltd).....	120
03	The Boston Mining Co.....	120
03	The Bras d'Or Marble Co. (Ltd).....	120
04	The British and Canadian Mica and Mining Co. (Ltd).....	121
04	The British Columbia River Gold Dredging Co. (Ltd).....	121
05	The Brompton Lake Asbestos Co.....	121
05		
05	The Calabogie Mining Co. (Ltd).....	122
05	The Caledonia Coal and Railway Co. (Ltd.).....	122
06	The Canada Co.....	123
06	The Canada Industrial Co. (Ltd.).....	131
06	The Canadian Anthracite Coal Co. (Ltd.).....	131
07	The Canadian Copper Co.....	131
07	The Canadian Granite Co.....	132
08	The Canadian Smelting and Refining Co. (Ltd.).....	133
08	The Cariboo Creek Mining Co (Ltd.).....	133
09	The Cariboo Quartz Mining Co.....	133
09	The Colonial Iron, Coal and Railway Corporation (Ltd).....	134
09	The Columbia Mining Co. (Ltd.).....	134
00	The Cowan Gold Mining Co.....	134
00	The Crowfoot Coal Co.....	135
01	The Crows' Nest Coal and Mineral Co. (Ltd.).....	135
01	The Cumberland Coal Mining Co.....	135
01	The Cumberland Railway and Coal Co. (Ltd.).....	136
01		
02	The Dominion Marble Co.....	136
02	The Dominion Phosphate and Mining Co. (Ltd).....	137
02	The Du Lievres Milling and Manufacturing Co.....	137

The East Wellington Coal Co.	138
The Elarton Salt Works Co. (Ltd).....	138
The Empire Consolidated Gold Mining Co	138
The Eustis Mining Co.....	139
The Fairbank Consolidated Mining Co. of Ontario, (Ltd).....	139
The Fleming Phosphate Mining Co.....	139
The General Phosphate Corporation (Ltd).....	140
The Golden Mining and Smelting Co. of Canada.....	141
The Grand Lake Coal Co.....	141
The Gravel Bay Mining Co. of Ontario, (Ltd)	142
The Haliburton Mining Co (Ltd).....	142
The Hidden Treasure Mining Co (Ltd)	142
The Hynes Terra Cotta and Brick Co. (Ltd).....	143
The Intercolonial Coal Mining Co. (Ltd.).....	143
The International Coal Co. (Ltd).....	144
The Kaladar Mining Co	145
The Kingston and Pembroke Iron Mining Co.....	145
The Kingsville Natural Gas and Oil Co. (Ltd).....	146
The Koksilah Quarry Co. (Ltd).....	146
The La Cumbre Mining Co. of Toronto (Ltd).....	146
The Lake Superior Mineral Land Development Co.....	147
The Lake View Mining Co. (Ltd).....	147
The Laurier Mining Co.....	147
The Lillooet Hydraulic Mining Co. (Ltd.)	148
The Londonderry Iron Co. (Ltd).....	148
The Lower Cove Stone Co. (Ltd)	150
The Manitoba Railway and Coal Co.....	151
The Memphremagog Mining Co.....	151
The Milton Pressed Brick and Terra Cotta Co. (Ltd).....	151
The Mineral Exploration Co. (Ltd).....	152
The Minudie Mining and Transportation Co.....	152
The Montawa Gold Mining Co	152
The Napier Mining Co. (Ltd).....	153
The National Gas and Oil Co. of Canada (Ltd).....	153
The Neebish Mining Co	153
The New Eureka Silver Mining Co. (Ltd).....	154
The New Vancouver Coal Mining and Land Co. (Ltd).....	154

138	The North Star Mining Co. (Ltd).....	155
138	The Nova Scotia Syndicate (Ltd).....	156
138		
139	The Ontario Gold and Iron Co. (Ltd).....	156
	The Ottawa Brick Manufacturing Co.....	156
139		
139	The Pacific Bullion Mining Co. (Ltd).....	157
	The Palgrave Gold Mining Co.....	157
140	The Perry Creek Gold Mining Co. (Ltd).....	157
141	The Phosphate of Lime Co. (Ltd).....	158
141	The Pope Manganese Co.....	159
142	The Portland Asbestos Mining Co.....	159
	The Provincial Natural Gas and Fuel Co. of Ontario, (Ltd).....	160
142		
142	The Queen's and Sunbury Coal and Iron Mining Co.....	160
143		
	The Rand Drill Co. (Ltd).....	160
143	The Richmond Slate Quarrying and Manufacturing and Asbestos Co. (Ltd).....	161
144	The Rockland Gold Mining and Milling Co.....	161
	The Royal Gold Mining Co.....	161
145		
145	The Saanich Lime Co. (Ltd).....	162
146	The Salt Spring Island Mining Co. (Ltd).....	162
146	The Stair Coal Mining and Manufacturing Co. (Ltd).....	162
	The Standard Oil and Gas Co. of Ontario.....	163
146	The Styles Mining Co. (Ltd).....	164
147	The Sudbury Mining Co. (Ltd).....	164
147	The Sydenham Mica and Mining Co.....	165
147	The Sydney and Louisburg Coal and Railway Co. (Ltd).....	165
148		
148	The Templeton and Blanche River Phosphate and Mining Co. (Ltd).....	168
150	The Texada Lime Co.	168
	The Texada Mining Co. (Ltd).....	168
151	The Thetford Asbestos Mining Co.....	169
151	The Thunder Bay Land and Mining Co.....	169
151	The Tilt Cove Copper Co. (Ltd).....	169
152	The Toronto Iron Co.....	170
152	The Toronto Mining Co. of Sugar Creek.....	170
152	The Tumbo Island Coal Mining Co.....	170
153		
153	The United Asbestos Co. (Ltd.).....	171
153		
153	The Vancouver Brick and Tile Co. (Ltd).....	171
154	The Vancouver Enterprise Mining Co. (Ltd).....	171
154	The Vancouver San Juan Lime Co. (Ltd).....	172

The Vancouver Smelting and Mining Co. (Ltd).....	172
The Victoria Hydraulic Mining Co. (Ltd).....	172
The Willow River Gold Mining Co. (Ltd).....	173
The Windsor Gold Mining Co. (Ltd)	173
Union Colliery Co. of British Columbia (Ltd)..	173
Vermillion Mining Co. (Ltd)	174
Waverley Hydraulic Mining Co. (Ltd).....	175
Weldford Coal Mining Co.....	175
Wellington Colliery Co.....	175
West Beaver (Ltd).....	176
West End Mining Co. of Ontario (Ltd).....	176
Western of Canada Oil, Land and Works Co. (Ltd).....	177
Westmoreland Mining Co.....	177
Whiteburn Mining Co.....	177
White's Asbestos Co. (Ltd).....	178
Wolfestown Asbestos Mining Co.....	178
Wolfestown Mining Co.....	178



172
172
173
173
173
174
175
175
175
176
176
177
177
177
178
178

MACHINERY AND SUPPLIES.

—(o)—

CLASSIFIED INDEX TO ADVERTISEMENTS.

—(o)—

Acids, Chemicals and Fertilizers.

	PAGE
Lyman Sons & Co., Montreal.....	xiii
Nichols, G. H., & Co., New York	xviii

Air Compressors, Rock Drills, etc.

American Diamond Rock Boring Co., New York.....	208
Canadian Rand Drill Company, Sherbrooke	xi
Ingersoll Rock Drill Co. of Canada, Montreal.....	Colored inset leaf
M. C. Bullock Manufacturing Co., Chicago.....	vi
Williams, A. R., Toronto.....	viii

Asbestos Manufactures.

The Chalmers Spence Co., New York	iv
---	----

Assayers and Chemists.

Bredemeyer, Dr. W., Vancouver, B.C.....	xv
Donald, Dr. J. T., Montreal	x
Lédoux & Co., New York.....	xxx
Moore, Dr. Gideon, New York.....	202
Wyatt, Dr. Francis, New York	206

Assayers and Chemists' Supplies.

Berge, J. & H., New York.....	xviii
Eimer & Amend, New York.....	208
Lyman, Sons & Co., Montreal.....	xiii

Bags for Ores and Minerals.

Canada Jute Co., Montreal, Que.....	xvii
-------------------------------------	------

Bankers, Brokers, Investment Agents and Dealers in Mines and Mineral Lands.

Chisholm, A. R., & Co., New York	xvi
Baker, Richard, London, Eng.....	xii
Ledyard, T. D., Toronto, Ont.....	xiii

Blasting Apparatus and Explosives.

Hamilton Powder Company, Montreal.....	v
--	---

Company Solicitors, Parliamentary Agents, &c.

Gemmill & May, Ottawa Ont.....	xii
McIntyre, Lewis & Code, Ottawa, Ont.....	206

Electric Light Motors and Mining Machinery.

The Ball Electric Light Co., Toronto.....	204
The Edison General Electric Light Co., New York.....	xxiv

Engines and Boilers.

Abendroth and Root Manufacturing Co., New York.....	iv
Beatty, M., & Sons, Welland, Ont.....	vii
Canadian Rand Drill Co., Sherbrooke.....	xi
Fleck, Alex., Jr., Ottawa, Ont.....	204
Howell, W. W., & Co., Halifax.....	xiii
Ingersoll Rock Drill Co. of Canada, Montreal.....	Colored inset leaf
Jenckes Machine Co., Sherbrooke.....	vi
Macdonald & Co., Halifax.....	xv
Matheson & Co., New Glasgow.....	iii
Truro Foundry and Machine Co, Sherbrooke.....	xix
White, W. C., Montreal.....	202
Williams, A. R. Toronto, Ont.....	viii

Engineers and Metallurgists.

Balbach & Sons, Newark; N.J.....	xxx
Benedict, W. de L., New York.....	xviii
Bredemeyer, W., Vancouver, B.C.....	xv
Hardman, John E., Oldham, N.S.....	xv
Ledoux & Co., New York.....	xxx
Orford Copper Co., New York.....	xiv
Stewart, John, Ottawa.....	xii

Gold Milling Machinery.

Bayne, A. N., & Son, Dartmouth, N.S.....	xiv
Matheson, I., & Co., New Glasgow, N.S.....	iii
Truro Foundry and Machine Co., Truro, N.S.....	xix

Hardware, Mining Supplies, &c.

Austin Bros., Halifax, N.S.....	x
Fuller, H. H., & Co., Halifax, N.S.....	xii
Ives, H. R., & Co., Montreal.....	x
Reynolds, W. B., & Co., Halifax, N.S.....	xiv
Rice, Lewis & Sons, Toronto, Ont.....	ix

Hoisting Engines and Winding Plants.

	Beatty, M. & Sons, Welland, Ont.....	vii
	Fleck, Alex., Jr., Ottawa, Ont.....	204
xii	Howell, W. W., & Co., Halifax, N.S.....	xiii
206	Ingersoll Rock Drill Co. of Canada.....	Colored inset leaf
	Jenckes Machine Co., Sherbrooke.....	vi
	Lidgerwood Manufacturing Co., New York.....	ii
204	Matheson, I., & Co., New Glasgow.....	iii
xxiv	M. C. Bullock Manufacturing Co., Chicago.....	vi
	Truro Foundry and Machine Co., Truro, N.S.....	xix
	Williams, A. R. Toronto, Ont.....	viii

Ore-Breakers, Crushers, Etc.

	Farrell Foundry and Machine Co., Ansonia, Conn.....	Inside back cover
204	Fleck, Alex., Jr., Ottawa.....	204
xiii	Ingersoll Rock Drill Co. of Canada, Montreal.....	Colored inset leaf
leaf	Jenckes Machine Co., Sherbrooke.....	vi
vi	Krom, S. R., New York.....	xvi
xv	Matheson, I., & Co., New Glasgow.....	iii
iii	Truro Foundry and Machine Co., Truro.....	xix
xix	Williams, A. R., Toronto.....	viii

Prospecting Drills.

	American Diamond Rock Boring Co., New York.....	208
	M. C. Bullock Manufacturing Co., Chicago.....	vi

Rubber Belting, Steam Packings and Rubber Goods.

	Canadian Rubber Co., Toronto, Ont.....	ix
	New York Belting & Packing Co., New York.....	Inside front cover

Smelting and Refining Works.

	Balbach & Sons, Newark, N.J.....	xxx
	Nichols, G. H. & Co., New York.....	xviii
	Orford Copper Co., New York.....	xiv

Stamper Shoes and Dies.

	Bayne, A. N., & Sons, Dartmouth, N.S.....	xiv
--	---	-----

Steam Pumps.

	Austin Bros., Halifax, N.S.....	x
	Canadian Rand Drill Co., Sherbrooke.....	xi
	Davidson, M. T., New York.....	Inside back cover
	Fleck, Alex., Jr., Ottawa.....	204
	Jenckes Machine Co., Sherbrooke.....	vi

Ingersoll Rock Drill Co., Montreal.....	Colored inset leaf
Matheson & Co., New Glasgow.....	iii
Truro Foundry and Machine Co, Truro.....	xix
Williams, A. R., Toronto.....	viii

Steel Rails, Mine Cars, &c.

Cooper, James, Montreal, Que.....	i
Gartshore, John J., Toronto, Ont.....	xiii

Wire Rope, Screens, Buddles, &c.

B. Greening Wire Co., Hamilton, Ont.....	xv
Cooper, James, Montreal.....	Inside front cover
M. C. Bullock Manufacturing Co., Chicago.....	vi
Roebblings, J. A., & Sons, New York.....	206



MINERS' PLANTS

CONTRACTORS' PLANTS

INGERSOLL ROCK DRILL CO.

OF CANADA (LTD.)

— MANUFACTURERS OF —

Rock Drills,

Air Compressors,

Steam Hoists,

Bar Channelers,

Stationary Engines,

Boilers,

SPECIALTIES.

Wire Rope, Derrick Cast-
ings, Pipe Lines, Steam
Hose, Steam Pumps,
Batteries and
Fuses.

203 St. James St., Montreal.

QUARRY OUTFITS

SUBMARINE PLANTS

t leaf
iii
xix
viii

i
xiii

xv
over
vi
206

THE UNIVERSITY OF CHICAGO
PRESS

THE UNIVERSITY OF CHICAGO
PRESS

THE UNIVERSITY OF CHICAGO
PRESS

MINING IN ONTARIO.

IT is often said that Canada is a country without a history and there is a sense in which this is true, however unpleasant it may be to have it told us by old-world men whose countries have a history which dates back to the early centuries of the Christian era. The sister Province of Quebec can boast of annals which begin to show the rime of age, for some of them relate to stirring events which happened three and a half centuries ago. From the days of Cartier down to the days of Montcalm there is an historic period of great interest, as the pages of Parkman very clearly show. But the Province of Ontario is for the most part less than half a century out of the woods, and its first century under constitutional government is not yet completed. Almost the only struggle in which its people have engaged has been with Nature, but in subduing the forest and changing the face of the country into cultivated fields they have shown the possession of British pluck and intelligence no less unmistakeably than their forefathers have done in enterprises which have won renown in every region of the earth. The first object of the immigrant was to provide shelter, food and clothing for himself and his family, and to this end he began with felling the forest, burning off the timber and getting the land into shape to grow cereals, roots and grasses. The country was well suited to this kind of enterprise, and the settler has been well repaid for his labors. It did not for many years occur to him that any other industry was deserving of his attention, with perhaps the single exception of utilising the trees upon his land by converting them into lumber or timber instead of burning them into ashes. But as the area of farm land was extended, as settlement increased and population grew, the need of diversity in pursuits became more obvious, one new industry after another was started, the foundations of towns and cities were laid, exchange of produc-

tion was seen to be profitable, and with success in trade the natural resources of the country made fresh calls upon intelligence and capital. Its stores of minerals were hardly suspected in the early days, chiefly no doubt because the parts first settled were almost exclusively agricultural, and partly also because the settlers had little or no knowledge of minerals. The frontier counties of the river St. Lawrence, as well as those bordering upon lake Ontario and lake Erie, showed barely a sign of any kind of ore, except at two or three places a deposit of bog iron. It was not until settlement began to push backward towards the head waters of the rivers, and lumbermen began to explore for timber in the highlands forming the divide between Georgian Bay and the St. Lawrence and Ottawa rivers, that a knowledge was gained of the existence of minerals in the Province. The labors of Logan, begun nearly fifty years ago, put the seal of scientific certainty upon the discoveries of the pioneers, and from his time down to the present the staff of the Geological Survey has been employed in an examination of our rock formations and in mapping them out for the guidance of all whose employment it is to search for the precious and economic minerals. The work of the Survey is far from being completed in Ontario, and many years must elapse before we can hope to have all the data gathered for a complete geological map. The area to be gone over is very extensive, little of it has been thoroughly surveyed, and there are vast tracts in which no work whatever has been done. Even in Great Britain, where eminent geologists have been employed for many years, important discoveries of coal, iron and other minerals are being made at frequent intervals in regions where their presence was never indicated by surface appearance; and if surprises of this sort occur in so small a region comparatively as Great Britain, we should not be impatient at the slow progress that is being made in Ontario. It should teach us rather the need of increased effort to cover the field; and in view of the territory which the Geological Survey is expected to cover, embracing the whole of the Dominion, it would appear to be the plain duty of the Government of Ontario

to provide for a careful and detailed survey of the Province upon its own account. There is little doubt that such enterprise would be speedily rewarded by new discoveries, for it is abundantly evident that in even the best settled portions there may be treasures of great value hidden away in the bowels of the earth. Less than four years ago no one believed that there was in Ontario any clay for the making of pressed brick, and the brick used in one of the largest bank buildings in the city of Toronto was imported from Ohio at a cost of \$40 per thousand. It is now well known that clay of the most suitable quality exists in great abundance within a few miles of that city, as well as in the counties of Peel, Halton, Dufferin and Grey, and pressed brick from works near Milton and Campbellville, on the line of the Credit Valley Railway, is manufactured at a cost of only \$18 per thousand. Another product, which until very recently was unknown in Ontario, is natural gas; but during the past year borings in the counties of Essex and Welland have demonstrated that we can procure it at a moderate depth over areas many square miles in extent. These instances illustrate what has been said of the possibilities of discovery when the geological features of the Province have been accurately determined in detail, and it needs no argument to show the economic value of a proper survey in relation to the mining industry. That industry, it must be confessed, has as little claim to a place in the history of Ontario as the Province itself has to rank in history—using that term in its largest sense. It is almost certain that the first attempt at mining was made in the year 1800, when a small blast furnace was erected at the falls of the Gananoque river, in the county of Leeds, for the smelting of iron ore. The supply of ore for this furnace was procured at a point several miles distant, in the township of Bastard; but the quantity was not sufficient to give a profitable result, and being of inferior quality also, the enterprise ended in complete failure. A second attempt was made at the close of the American war, on the shore of Lake Erie, in the county of Norfolk—commenced by John Mason in 1815 and brought into successful

operation by Joseph Van Norman in 1822. A furnace of small capacity was erected for the smelting of bog iron ore found in the locality with charcoal fuel. The ore was drawn to the furnace in waggons, and for eight or nine months in the year the daily make of pig-iron was about three tons, three tons of ore producing one ton of pig. There was, however, no sale for the pig-iron, and the whole of it was made into various kinds of castings, shipped to ports along the lake shore, and taken into the interior by teams to find a retail market. In this way the new settler was furnished with sugar kettles and potash kettles, the latter for manufacturing the only article of export for which payment was received in cash. There was little money in the country in those days, and business was carried on by the exchange of commodities. Mr. Van Norman himself is authority for the statement that what the farmers of the district had to sell was brought to the furnace and exchanged for the wares or due bills of the firm; and when the home market became overstocked the wares were shipped to Buffalo and other United States ports. But owing to the scarcity of ore and fuel the furnace was blown out in 1847, after having been in successful operation for a quarter of a century. A subsequent venture to make charcoal pig-iron with bog iron ore was undertaken by Mr. Van Norman at a point farther west in the same county, in the township of Houghton, under a contract to supply pig-iron for the manufacture of car-wheels; but it was found to lack the chilling quality of good malleable iron, and the furnace was abandoned. Several efforts have been made to smelt the magnetic ores of the Hastings district, and all have failed. The first of these was begun at Marmora about 1820, where the ore smelted was obtained from the Blairton mine. This furnace was worked at intervals by various owners, among whom was Mr. Van Norman, but the business was never successfully managed, and all the capital invested in it was sunk. Another blast-furnace was erected about the year 1836 at Madoc, to smelt ore taken from the Seymour mine. It was attended by misfortune from the beginning, due in part to the want of means and in part

to a lack of knowledge of the proper way to treat hard magnetic ores. For some time a supply of charcoal could not be procur- ed, and cordwood was used in the furnace instead. The daily product of pig-iron was, however, too small for profit with this kind of fuel, and smelting with charcoal was again resumed ; but the death of one of the partners, caused by an explosion in the mine, resulted in the closing of the works. With small capital and primitive methods it was not to be expected that smelting works could be managed successfully in regions so inaccessible as Marmora and Madoc were in those days, and added to these drawbacks was the lack of experience and skill in preparing magnetic ores for the furnace. With modern plant, a practical and scientific knowledge of how to treat and mix these ores, adequate capital, facilities for cheap transportation and good business management, there is no reason to doubt that the manufacture of charcoal iron might not be as successfully carried on in Ontario as in New York, Michigan or Wisconsin. A number of mines have been opened and worked to some extent along the lines of the Ontario Central and the Kingston & Pembroke railways, as well as at several points in the county of Lanark ; and there is reason to believe that were furnaces erect- ed at convenient points in those districts, or a good market obtained elsewhere, they might prove to be valuable properties. Lead mines have been worked in the counties of Frontenac and Lanark and in the district of Algoma, and smelting furnaces have been erected at Kingston and near Carleton Place ; but none of these undertakings have been fortunate, and mines and furnaces have been closed down. Better success has attended phosphate mining in the eastern part of the Province, chiefly in Lanark and Frontenac. Numerous veins or occurrences have been worked in these counties during the past twenty years, and phosphate of rich quality has been raised and shipped to the English markets. Discoveries of an important character have recently been made in the counties of Renfrew and Haliburton, and although phosphate has nowhere in Ontario been found in such large bodies as in Quebec it is certain that we possess it in

paying quantities throughout an extensive region. Works for the manufacture of superphosphate have been established at Brockville and Smith's Falls, and at the latter town the annual product of fertilizers is now about 500 tons. Several mica mines have been worked during recent years in the eastern part of the Province, the most important of which are in Lanark and Frontenac. The Smith & Lacey mine near Sydenham, in the latter county, has yielded a large quantity of amber-colored mica, some crystals of which are seven feet square. The market for it is found in Canada, the United States, England, France and Germany. Actinolite has been found in large quantities in the county of Hastings, and a mill for preparing it has been in operation at Bridgewater for a number of years. In its crushed state, when mixed with coal tar and pitch, or asphalt, it makes an excellent material for fire-proof roofing. The gypsum quarries of the Grand river valley, in the counties of Brant and Haldimand, have been worked for more than forty years. Mills for grinding the rock have been erected at different points, and about 6,000 tons of land plaster are manufactured annually. Within the last three or four years calcining works have been established at Paris and near Cayuga, where the manufacture of calcined plaster and alabastine is carried on. Reference has already been made to the existence of natural gas in the counties of Essex and Welland, and to beds of clay for the manufacture of pressed brick in the district north of the western end of Lake Ontario. It is not thought that the natural gas is to be found in very great quantity. Certainly none of the wells yet put down have proved to be "gushers" like some of those which have been bored in Pennsylvania and Ohio. But the supply appears to be ample to encourage its utilization for illuminating purposes in the towns within easy reach of it, and the opinion is confidently entertained by many that it is likely to prove as lasting as even the great wells on the other side of Lake Erie. A well which was put down a few months ago near the railway, three miles west of Port Colborne, furnishes all the fuel required for two large lime-kilns, and it is stated that lime

of better quality is produced now at no cost for fuel than was formerly produced with wood fuel at a cost of thirty-five dollars per day. Gas for lighting the entire length of the Welland canal might be cheaply furnished from wells bored in the vicinity of Port Colborne; and there is no reason why it should not also be utilized for factories or smelting works on this canal. A well bored for petroleum at Port Colborne in 1867 has been yielding a small supply of gas ever since, and it was the knowledge of this fact which led to the sinking of other wells in that district for gas in 1889. In Essex it was a knowledge of the fact that the Cincinnati anticlinal crosses that country which induced parties to bore for gas there, as on that anticlinal are located some of the most productive wells in Ohio. The material for pressed brick is found in great abundance below the outcrop of Medina sandstone, along the easterly escarpment of the mountain which stretches northward from Hamilton, and also in the upper beds of the Hudson River shales in the valley of the Humber river. The brick is of excellent quality and color, and promises to come into extensive use for buildings of the better class. The salt beds of western Ontario cover an area of about 1,200 square miles, embracing the counties of Lambton and Huron, and portions of Bruce, Middlesex and Kent. They were first discovered in 1865, at Goderich, in boring for petroleum, and since that time wells have been sunk at Clinton, Seaforth, Brussels, Blyth, Wingham, Kincardine, Port Franks, Exeter, Courtright and other places. The beds are usually three in number, with an aggregate thickness of about 100 feet, and the salt is of the best quality. The annual product is about 60,000 tons, but the wells in operation have a capacity for at least five times that amount. Their market is limited to Ontario and the Northwest, as owing to the free entry of salt they are unable to compete in the Lower Provinces with English salt brought over at a nominal charge for freight. There are three areas in Ontario from which petroleum has been obtained, Petrolia and Oil Springs in the county of Lambton and Bothwell in the county of Kent. The two former only

are being worked ; the latter was abandoned a quarter of a century ago, having been operated from 1860 to 1865. The existence of petroleum was known in those districts at an early period of their settlement, from its oozing out in springs or along the banks of streams ; but it was not until 1859 or 1860 that attempts to utilise it were made by sinking surface wells to a depth of 50 or 60 feet and allowing the petroleum to collect therein. It was not until 1861 that wells were bored into the rock at Oil Springs, and then some extraordinary results were obtained. In the winter of 1861-2 flowing wells were struck which produced in some cases thousands of barrels daily. At one time there were about twenty of these flowing wells, and hardly a pump was operated. But in the course of two years they ceased to flow, and thereafter the petroleum produced at Oil Springs was raised with pumps. In 1865 the Petrolia region was opened, and in one locality flowing wells were struck which yielded for several months at the rate of 400 barrels per day. But gradually the flow subsided, and since 1867 almost the whole of the petroleum at Oil Springs and Petrolia has been lifted with pumps, the yield gradually diminishing until at present it does not average more than half a barrel per day for each of the 3,000 wells in operation. The total yearly output of the Petrolia and Oil Springs territories is about 600,000 barrels of crude, almost all of which is now distilled at Petrolia. Formerly London was the centre of the oil-refining industry in Ontario, but experience has shown that the business can be more successfully managed where the crude oil is produced. Gold has been found in a number of localities in Ontario, but chiefly in the county of Hastings, in East Algoma and on Lake of the Woods. Numerous gold-bearing veins were discovered in Hastings more than a quarter of a century ago, and they were worked after a fashion for several years ; but although the gold is believed to exist in paying quantities the methods of extracting it from the ore only resulted in loss and failure. A large amount of capital has been sunk at the Deloro gold mills, near Marmora, where the chlorination process has been tried. During the present year a new

company has been organized, and operations have been begun which appear to promise success ; but the value of a new method of treating gold ore cannot be proven in a day. Of the Algoma and Lake of the Woods locations nothing can be definitely asserted, excepting that rich specimens have been obtained from them. None of the properties have yet been developed to a satisfactory extent. The silver veins of the Lake Superior region give promise of far better things. The Silver Islet vein, discovered in 1868 and sunk upon to a depth of 1,260 feet, has yielded ore to the value of \$3,000,000, and it is probable that the mine might be working yet but for the mistakes which characterized its management. Several other properties have been operated in the vicinity of Port Arthur, but none of them have been productive on a paying scale. The mines which are being worked at present are situated between Rabbit Mountain and Whitefish Lake, south-west of Port Arthur, the first discovery of silver in this district having been made in 1882. The veins are found in the black shales of the Animikie formation, in widths ranging from two to six feet, and at several mines they have yielded large quantities of silver. The greater number of the properties are owned by American companies, but English capital is also being invested, and more is likely to follow in the near future. Those best able to express an opinion do not hesitate to say that this is one of the most hopeful of the mining districts of Ontario, and when the railway now under construction from Port Arthur is completed to Whitefish Lake opportunities for working the mines upon an economic basis will give a healthy stimulus to operations. The history of copper mining in the Province is almost of a piece with that of iron mining ; it is a record of failures. At Bruce Mines, at Mamainse and on Michipicoten island operations were carried on many years ago, with varying success. At the two latter places capital was wasted under bad management, and but little ore was raised. The Bruce Mines locations were opened about the year 1854, and work continued upon them down to 1876. The ore was moderately rich, and had the business been carefully

managed and economic methods used the enterprise would no doubt have succeeded fairly well. The total product of those mines is variously computed at from \$3,000,000 to \$7,000,000 ; but however much the ore realized in the market it seems to be certain that the cost of production was a still greater figure. Labor was dear and uncertain ; scarcely any labor-saving machinery was employed ; transportation was a heavy charge ; the price of copper was steadily falling ; and altogether circumstances were adverse to mining operations in a frontier region thirty years ago. With the railway facilities which we now have, with rock drills and dynamite, and all the modern machinery of well equipped mines, the issue would no doubt have been different. The discovery a few years ago of extensive ore ranges in the country north of Georgian Bay carrying nickel and copper, and especially in the vicinity of Sudbury, has given a new and strong impulse to the mining industry of the Province. The first mine at Sudbury was opened only four years ago, and now three powerful companies are operating there, taking out and smelting about 450 tons of ore daily and giving employment to nearly one thousand men. In no other part of the world are there such valuable nickel mines as here, and the results of recent experiments in metallurgy have so satisfactorily demonstrated the utility of this metal that we may with confidence regard the Sudbury region as one of the most promising of all the mining regions of Canada, if not of the world.



CANADIAN PHOSPHATE.

THE use of animal and vegetable substances for purposes of fertilization is as old as the history of agriculture, but it was only in 1840 that the great German chemist Liebig pointed out that mineral substances might be made available for plant food by treating them with sulphuric acid. The acid is supposed to effect a very fine subdivision of the mineral particles, thus permitting their absorption by the plant. This discovery gave an impetus to the search for minerals containing those substances that had been proved to promote vegetable growth, and which had been discovered by chemical analysis to be component parts of plants and to be present in the soil. As it was evident that the plant extracted these substances from the soil, it was clear that the soil must be replenished or it would become barren. One of the most important of these elements is phosphoric acid, of which every average soil contains about 68.6 lbs. to the acre. As every net ton of wheat contains about 16 pounds of phosphoric acid, the supply of this element in one acre of soil would be exhausted by the production of 4.16 tons of wheat, and in order to preserve the fertility of the soil, this expenditure must be restored to it.

The mineral known as Apatite contains in its purest form, according to the analyses of Prof. Chapman, 92.26 per cent. of phosphate of lime, which is equivalent to 42.26 per cent. of phosphoric acid. The existence of this mineral in Canada had been casually reported by explorers, and in 1829 the occurrence of Apatite near the Lievres river, in the Province of Quebec, was mentioned by Lieut. Ingall, of the 15th Regiment. In 1847, Dr. T. Sterry Hunt reported its existence in North Burgess, Ontario, and in 1860 the first attempt was made to produce it for commercial purposes. The first cargo of phosphate was lost at sea and subsequent shipments to England did not meet with favour, owing to its hardness and the presence of flouric acid, which proved injurious to the workmen employed in its manufacture

into superphosphate. But experience gradually overcame these difficulties, and Canadian Phosphate of Lime, or Apatite, is now recognized as the richest available source of phosphoric acid, and all that can be produced is readily sold in the markets of the United Kingdom and Germany; phosphate of 80 per cent. quality being worth at present about twenty-two dollars per ton at Montreal.

The use of phosphate is rapidly increasing as agricultural education spreads; and there appears to be a certainty of an ever growing demand. The imports of phosphate into the United Kingdom in 1887 were 283,415 tons, as stated by Mr. Herman Voss. The annual product of Carolina and Florida now exceeds half a million tons, and quantities are produced in France, Belgium, Spain and the West Indies. Most of these phosphates however are of low grade, yielding from 40 to 60 per cent. of phosphate of lime, and, with the exception of a limited quantity produced from the island of Curaçoa, there is no phosphate in the world that averages as high in quality as the Apatite which is found so largely in Canada, and to a more limited extent in Norway and Spain.

The phosphate deposits of Canada, which so far have been worked, are found in Ottawa County, in the Province of Quebec, and in Ontario, in the Counties of Lanark, Leeds, Frontenac and Renfrew. The first mining was done in the Township of North Burgess, Lanark County, and about the year 1863 extensive investments were made in lands in that township, near the Rideau Canal, as high as \$300 per acre having in some cases been paid. In 1872 mining was begun on the Lievres river and gradually increased until 1880, when English and American capitalists embarked in the industry and prosecuted work on a large scale with the aid of steam machinery. Previous to this time hand labor only was employed and a good proportion of the output was obtained by farmers, who discovered the mineral on their lands and worked at it in a desultory manner as attention to their farm duties permitted. Organized companies employing from 100 to 150 men, with the aid of drills, hoists and pumps,

worked by steam or compressed air, now put a different face upon the industry. Four of these companies sustained annual outputs of from three three to eight thousand tons each, and the total yearly production rose to nearly thirty thousand tons. Transportation from the mines to the river bank was performed by means of tramways, and barges and steamboats were placed upon the Lievres River. A branch line was built by the Canadian Pacific Railway to the landing place of the barges at Buckingham, and by these means cheap transit was afforded to the ship at Montreal. The mines in Templeton, Wakefield and Hull avail of barge freight on the Ottawa River at equally low rates, so that the transport from the pit mouth to the ship's side has not usually exceeded \$3 per ton, and has sometimes been as low as \$2 per ton.

The greater portion of the phosphate production of Canada has been latterly obtained from Ottawa County, mainly from the vicinity of the Lievres River. In this region the mineral has been found in occasional large bunches or else occurring in irregular streaks through a mass of rock, so that by the process of quarrying with steam drills a great amount of rock can be moved from which more or less phosphate can be obtained. In Ontario the deposits are often found in distinct veins in the midst of barren rock, and it is usually found more profitable to work by hand drilling in a smaller compass than is possible with machinery; and though the output may be smaller by this method, there is a greater probability of the persistence of the seams. These veins have, in some cases, been traced for upwards of a mile and are found to be continuous in depth as far as explored. The deepest workings so far have been to a depth of 200 feet in Ontario, and 650 feet in Ottawa County. But though persistent in depth, the width of the seam is very variable. Dr. Hunt says, "The thickness of the bedded masses of apatite may be said to vary from one foot to three or four feet, though not unfrequently expanding to eight or ten feet, or more; and sometimes contracting to a few inches, the same layer being subject to considerable variations." When the vein narrows there is often found to

be a compensatory widening, just, as has been said, may be observed when two slices of bread thickly buttered are placed together and subjected to unequal pressure. In that case there will be regions where butter abounds and spaces that possess very little. This irregularity of phosphate deposits has proved very discouraging to those working in a small way and confining their efforts to a single vein, whereas those who work a number of deposits are more likely to secure a paying result; for when one seam is pinching another will be widening, and the average result may be good. An Ontario farmer, discouraged by the vagaries of the vein of apatite that he had endeavored to follow, upon being asked his opinion of phosphate mining replied: "It's broad, it's narrow, it's deep, it's shallow, it's long, it's short, it's here, it's there, you see it and you don't see it, it appears, and it disappears, you've got it and you haven't got it, it's a confounded nuisance and I won't have a darned thing to do with it." But similar remarks might be made of nearly all mineral veins; and success in working them is only gained by a careful adaptation of means to circumstances, and a combination of intelligence with economical effort.

The Apatite occurs usually in connection with pyroxene, lime or mica, and sometimes there occurs a grand mixture of all four, with iron pyrites, hornblende or felspar added. One miner was fond of boasting that he had 23 minerals in one pit, which he called "the Old Trusty." While the Apatite itself is usually of a uniform high grade, the quality of the cargo shipments depends upon the care with which the impurities are separated; and analyses vary from 88 to 65 per cent. Sometimes iron pyrites and mica are so disseminated through the Apatite that separation by hand-cobbing is impossible. Mills have been erected at Buckingham for the purpose of grinding and separating this low grade ore; and by a system of fanning, screening and hand-picking, a good grade of phosphate is saved that was formerly wasted. The Apatite is usually of a green color, but varies in shades between white and red. It sometimes occurs with a red felspar so similar in

color that its separation is difficult, and again, the greenish pyroxene may be mistaken for it. In the early history of the industry, a cargo lot of pyroxene was actually forwarded to England in mistake for phosphate, and the unfortunate shipper was astounded by a draft for freight and charges, accompanied by a chemists' certificate, saying, "there is dirt enough in this country without importing any from across the Atlantic."

The large profits, as in most mining industries, have fallen rather to the land speculator than to the mine operator. One block of about 1,600 acres purchased from the Government for less than \$5,000 was sold for \$16,000, then re-sold in two portions for \$160,000, one of which was afterwards "capitalized" in a stock company at \$450,000. Another property of 100 acres, bought at sheriff's sale for \$15, was finally sold for \$125,000 in cash. A few parties have made large profits for a time from legitimate mining, and many have increased their incomes substantially by judicious work on a small scale. It is found by experience that the phosphate mining industry does not often offer a large speculative profit, and will not bear excessive capitalization, nor extravagant methods of operation; but it promises a fair commercial return to those who make a wise selection of lands, exercise intelligent methods of work and practice judicious economy. A very great benefit has been conferred upon the country by this industry, and during the fifteen years in which it has been actively prosecuted, it has occasioned an expenditure in Canada of at least three million dollars, all of which has inured to the benefit of working people. If in some cases investors have failed to get a satisfactory return, they can have the consolation of knowing that the money has been spent in wages for poor people, and has always had a chance of bringing in a large recompense; for he who mines gambles with nature and sometimes wins great prizes and sometimes gets nothing. But the money is not "thrown into the ground" when scattered among hardy wage-earners. In some cases while working phosphate, deposits of mica, felspar, plumbago, cop-

per, asbestos and iron have been found, and now and then a gleam of gold excites and encourages the worker.

A question which bears with great importance upon the phosphate industry is, whether Apatite in its crude state is effective as a fertilizer. The usual method of treatment is to grind it and mix it with an equal quantity of sulphuric acid, by which it becomes superphosphate and is used as the basis for all manufactured fertilizers. By this treatment it becomes soluble in water and thus is more readily available for plant food. But many chemists state that after being placed in the soil the superphosphate reverts and becomes insoluble again, so that all the expense is gone to for a few hours or day's benefit, or, even if it continues soluble, a great portion is washed into the sub-soil or carried away by the rains; whereas, if very finely ground and placed in the soil, the acids of the earth and plants gradually act upon it and make it serviceable by degrees, so that in the end it confers a greater benefit. A great deal of testimony has been obtained in favor of the value of the crude phosphate, especially when used in connection with stable manure; and, if this fact can be established, it will secure to the farmer a reduction of one half of the cost of fertilizers and will enormously increase the use of phosphates, as, apart from the lessened expense, people feel more confidence in the use of a natural product than they do in a manufactured article, owing to the suspicion of adulteration that unfortunately has been warranted by experience.

The question of the origin of Apatite has long vexed the minds of geologists, some of them favoring the theory of its having been ejected from below by volcanic forces, others favoring the idea that it has been deposited by water, while others think that it has been formed in its present position by extraction from the surrounding rocks. Dr. R. A. F. Penrose, Jr., in his monograph on phosphates published by the U. S. Geological Survey, after long examination of the Canadian apatite veins, inclines to the latter opinion. The surrounding "mother rocks" are found, more or less, to contain phosphate of lime disseminated through-

out the mass, and it is probable that, when in a soft condition, under the influence of superheated steam and other igneous or chemical forces the phosphate has been collected in masses in the veins. There are some seams on the other hand so regular in form as to favor the theory that these are sedimentary deposits. The great variety of the modes of occurrence suggests the possibility that all the theorists are right and that formations have taken place in every imaginable manner.

The mining of phosphate has been limited to accessible regions and it is known to exist in districts where the expense of transportation now prevents its production. The Locks, now in course of construction, on the Lievres River will give access to a few more properties that have been kept in abeyance awaiting better facilities for access and egress, and the Gatineau Valley Railway will open a large region where phosphate "shows" abound. Prof. B. J. Harrington, who examined the great pyroxene belt upon which the mines of the Canadian Phosphate Co., the Phosphate of Lime Co., and the Anglo-Canadian Phosphate Co. are situated, and which has been the most productive region in Canada, states that this belt stretches away in a northerly direction and good deposits of phosphate are likely to be found in it. The Gatineau Valley Railway will strike this belt and afford excellent facilities for mining operations in what is at present an almost unexplored region.

In the Haliburton district, north of Peterborough, Ontario many surface shows of Apatite have been found and an effort is being made to develop the deposits. Other productive regions will doubtless be found, and the progress of invention will enable many deposits to be worked which are now too much mixed with impurities to be separated profitably by present methods. Processes have already been invented, and to some extent applied in Europe, by which the phosphate is taken into solution by acid and then precipitated in a pure state. If this can be done cheaply, the lower grade ores could be pulverized and treated in this way and the profit derived from it would turn the scale in favor of many a property which now

fails to pay, because it can only use its high grade product, which is not plentiful enough to bear the whole burden of earning a profit. The perfection of this invention, which is certain to come ere long, will greatly aid and stimulate the Canadian phosphate industry.

The world must have phosphate ; Canada possesses the highest quality known, scattered over a wide area ; human ingenuity will surely devise means to make these deposits available for the world's needs. Even though at present there may in some cases be disappointment in the results of phosphate enterprises, as there will be in all mining ventures, we may feel assured that a great and prosperous future awaits the Canadian industry, and that it is destined to fulfil an important part in the economic development of the country ; as the farming community becomes more educated they will awaken to the means of wealth that they now heedlessly allow to pass their very doors, going to enrich lands across the sea, while their own impoverished fields are crying out for the sustenance that phosphate would impart. An important duty rests upon the Agricultural Departments of Government and Agricultural Societies to spread this information. The older portions of Canada, which formerly raised vast quantities of grain, have been allowed literally "to go to grass," but the knowledge of the use of mineral manures rightly applied will redeem the land from barrenness. To secure this result by mining Apatite, preparing the phosphate of lime for use, educating the farmer to a sense of its value, and stimulating him to the enterprise of applying the knowledge practically for the benefit of his lands is a mission that will not only prove profitable as a business undertaking but is one that would fully satisfy the moral and benevolent feelings of the philanthropist, for as Dean Swift has said: "That whoever could make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before, would deserve better of mankind and do more essential service to his country, than the whole race of politicians put together."

The following are the leading companies organized to work phosphate lands in Canada, showing the authorized capital and labour employed by each:—

Name of Company.	Nationality.	District at work.	Nominal Capital Stock.	Labour Employed. 1890
Anglo-Canadian Phosphate Co. (Ld.)	English.	Perth	£100,000 stg.	40
Anglo-Continental Guano Works Co. (Ld.)	German	Lievres River	M. 16,000,000	80
Canada Industrial Co.	Canadian	Templeton	\$50,000	150
Canadian Phosphate Co.	English	Lievres River	Private.	Not working.
Central Lake Mining Co.	Canadian	Lievres River	Private.	15
Dominion Phosphate and Mining Co.	American	Lievres River	\$125,000	50
Dominion Phosphate Co. (Ld) of London	English	Lievres River	£40,000 stg.	50
East Templeton District Phosphate Mining Syndicate	English	Templeton	£6,000 stg.	100
Foxton Mining Co. (Ld.)	English	Kingston	£12,000 stg.	60
Frontenac Phosphate Co.	English	Kingston	£10,000 stg.	20
Haliburton Mining Co. (Ld.)	Canadian	Haliburton	\$100,000	Prospecting only.
Kingston Mining Co.	English	Kingston	£5,000 stg.	25
Little Rapids Mining Co.	Canadian	Lievres River	Private.	10
MacLaurin Phosphate Mining Syndicate	English	Lievres River	£20,000 stg.	50
North American Phosphate Co.	Canadian	Templeton	\$18,000	Not working.
Ottawa Mining Co.	American	Templeton	Private.	30
Phosphate Corporation (Ld.)	English	Lievres River	£200,000 stg.	100
Phosphate of Lime Co. (Ld.)	English	Lievres River	£50,000 stg.	200
Sebastapol Mining Co.	English	Kingston	£5,000 stg.	Organized.
Sydenham Mica and Mining Co.	Canadian	Kingston	\$250,000	20
Templeton and Blanche River Phosphate Mining Co.	Canadian	Templeton	\$30,000	Not working.
Templeton and North Ottawa Mining Co.	English	Templeton	£50,000 stg.	Not working.

† This is the total Capital of company; the company is also engaged in the manufacture of fertilizers in Great Britain, and carries on mining operations in other parts of the world.

* Total Subscribed Capital.

The following have been the prices of Canadian phosphate F.O.B. in Montreal for the season 1890.

GUARANTEED ANALYSIS.		Price per Ton.
		\$ cts.
85 per cent.		24 70
80 "	(rising 40 cents per unit per ton)	22 41
75 "	"	17 82
70 "	(rising 30 cents per unit per ton)	14 37
65 "	"	11 19
60 "	(rising 25 cents per unit per ton)	7 74

These quotations are based on prices obtainable in the United Kingdom, figuring on a 6/6d. freight; add one penny, per unit, on higher grades when sold to Hamburg or Antwerp.

The following have been the Exports of Canadian Phosphate from 1877 to 1890:—

Year.	Quantity. Tons.	Value. \$	Year.	Quantity. Tons.	Value. \$
1877.....	2,823	47,084	1884.....	21,709	424,240
1878.....	10,743	208,109	1885.....	28,969	490,293
1879.....	8,446	122,035	1886.....	20,440	343,007
1880.....	13,060	190,086	1887.....	23,152	433,217
1881.....	11,958	218,456	1888.....	18,776	298,609
1882.....	17,153	338,357	1889.....	29,987	394,768
1883.....	19,716	427,668	1890.....	22,000	Estimated at 1st Nov., '90.

Imports into Great Britain of Canadian phosphate compared with the total imports of phosphate into that country.

Year.	Canadian Apatite.		Total Phosphates.		Per cent. of Canadian Apatite to total quantity.
	Long tons.	£ stg.	Long tons.	£ stg.	
1882.....	8,187	39,851	199,428	613,198	6.5 per cent.
1883.....	16,531	66,714	246,945	813,825	8.2 "
1884.....	15,716	52,370	219,225	643,851	8.1 "
1885.....	21,484	76,179	238,572	628,027	12.1 "
1886.....	18,069	63,490	223,111	526,885	12.0 "
1887.....	19,194	65,974	283,415	614,088	10.7 "
1888.....	12,423	42,291	257,886	544,919	7.7 "

These figures have been compiled from "The Mining and Mineral Statistics of Great Britain."

THE CANADIAN ASBESTOS INDUSTRY.

HERE is probably no mining interest in Canada that has shown such marked progress, or that gives such promise of profitable and constant returns as that of the peculiar mineral asbestos. Although of comparatively recent date the many uses to which its manufacture has been applied, have increased so rapidly that it is with difficulty that the production can keep pace with the present demand, although the output from the Canadian mines has increased one hundredfold in the last ten years. The word is derived from the Greek, *Asbestos*, signifying inconsumable or unquenchable, and this property was known to the Ancients many hundred years ago. The term asbestos, is at the present day applied to minerals which differ very considerably in their mode of occurrence and composition. That which was first known as the asbestos of the Ancients is a variety of the hornblende family, and allied to tremolite, actinolite, etc. It consists of fine, somewhat elastic fibres, varying in color from almost pure white to greyish and greenish tints, and in length at times nearly or quite two feet, with a soft silky aspect, looking very much, in fine specimens, like floss silk itself. In the flame of the blow-pipe, the mineral is but little acted upon, although after being exposed for some time to long continued heat the fibre loses tenacity, and becomes brittle or even sandy to the touch. It can be spun like cotton and woven into cloth, and can be manufactured into a great variety of substances such as fire proof curtains, wallpaper, suits of clothing, millboard, rope and steam packing of various kinds. It is of special value for the last purpose, owing to its entire non-conductivity of heat and indestructibility when in the case of the severe work it has to stand in connection with marine and other engines it is exposed to long and constant wear; in

this respect far exceeding any material heretofore employed for this purpose. It has, however, been found of almost too slight consistency to possess great value for textile purposes by itself, but this has been overcome by combining the spun fibres of the mineral with threads of cotton or flax, and in the museum of the *Canadian Mining Review* can now be seen a complete suit of clothing from helmet to shoes such as is supplied to the firemen of Paris and other cities on the Continent, dressed in which a man can walk with almost absolute impunity into the hottest flames. The face in this case is protected by a very fine wire gauze which enables the wearer to see dimly and to respire as well as the dense atmosphere which he has to penetrate will permit. Besides the true asbestos of commerce, other varieties known as mountain cork, mountain leather, and mountain wood are met with, but these have not yet been found adapted for use in the arts or manufactures, or at least not to any very great extent.

The mineral which is produced in Canada at the present day under the head of asbestos, is in reality not asbestos proper, but a form of serpentine called chrysotile. This occurs in veins in certain portions of the great belt of serpentine rocks of the Eastern Townships of Quebec, though in the serpentines of the Laurentian also this mineral is sometimes found in small veins, but not as yet in quantity to be economically available, though subsequent exploration in this direction may disclose workable deposits there as well. In the Laurentian rocks of certain areas, however, the variety actinolite sometimes forms hilly masses of considerable size, which has been mined for several years, and while not as yet found to be suited for the manufacture of millboard, and the finer qualities of steam packing, answers admirably for cements, paints, etc., in the same way as the tremolite of the State of New York; these deposits of actinolite are therefore highly important, and will without doubt increase rapidly in value.

Although of such recent date, the Eastern Townships asbestos, for the name may as well be retained, has now a world-wide reputation, and is shipped in large quantities to the various countries in Europe, England, Italy, Germany and Belgium, and to the United States also, and of the many firms now engaged in its manufacture, the greater portion draw the bulk of their raw material from a small area in Eastern Quebec; the Italian mines, from which the asbestos was formerly obtained, being worked with far greater difficulty than those in Canada, while the supply of the mineral is much more uncertain, and although for certain special lines the Italian may be more valuable than the Canadian, the latter has been found of sufficient value for most purposes so as to almost entirely supplant the former, even with those firms who control the output of the Italian mineral, a fact evidenced by the recent purchase of a Canadian property by the United Asbestos Co. of London, England.

Although asbestos was known at many points in Eastern Quebec more than thirty years ago, and was exhibited at the International Exhibition in London in 1862, no attempt was made to work the mineral for some years. The credit of the discovery of the Thetford area is probably due to a French-Canadian named Fecteau, and following up his discovery certain areas were secured from the Government by private parties. The true value of the mineral was not at first recognized, and in the first year of mining operations, (1878) only 50 tons were taken out, for which a ready sale was not at first obtained. The importance of the discovery was however speedily ascertained, and new companies obtained tracts of rocky land in the townships of Thetford and Coleraine, and began the work of exploration and mining. Had the Government of Quebec at that day been in possession of the requisite information regarding its mineral lands, it is very probable that the thousands of acres which rapidly changed hands in that section of the province, would have brought in much greater returns than the usual Government

rate. Curiously enough, however, though the areas of the serpentine in the townships of Thetford, Coleraine, Ireland and Wolfestown are very extensive, the portions in which the mineral abestos is found are comparatively rare, and the mining though now prosecuted for nearly a dozen years, is practically confined to two small sections about four miles apart. The first, and as yet the most important of these, is the small mound near the Thetford station on the Quebec Central Railway, which rises about 80 to 90 feet above the track; the other, the bold ridge of brownish looking rock to the southeast of Black Lake station, which assumes much greater prominence, and probably has an elevation of 650 to 700 feet above the railway at this point. It must, however, be said in regard to some of the areas of serpentine that lack of sufficient exposures, owing to soil and forest growth prevents in many cases a careful search, but in other portions where the bare rock is well exposed as on the great ridge of Ireland and Wolfestown, as well as much of that towards Lakes Caribou and Little St. Francis, much of the rock has a hard reddish-brown weathered surface which does not promise favorable results to the prospector, who from a comparatively brief experience can very generally decide, with a fair amount of assurance whether certain areas are likely to prove of value or not as a source of supply for asbestos.

The growth of the industry can be seen at a glance by comparing the output of 50 tons in 1878 with that of nearly 6,000 tons in 1889, a total which would have been further increased, presumably by some 5,000 tons at least, had the pits of the Scottish Canadian Company at Black Lake been in operation. The importance of this industry to the Province of Quebec may be inferred from the fact that this amount represents a cash value at the mines of about \$450,000, and the industry has now risen to such proportions that hundreds of thousands of dollars of capital are now seeking investment wherever an opportunity of successful operation is presented. Caution, however, on the

part of those desiring to invest is advisable at present. The productive areas of the present asbestos district are very well known to those interested in the industry, and the really valuable areas now in the market can easily be counted on the fingers of one hand.

The methods of working are being radically changed. The old system of hand labor and horse derricks which has prevailed for years, and which in the face of a limited demand answered well enough so long as the depth and extent of the quarries were small, has now become entirely impracticable in the face of large pits and the urgent necessity for large production. Steam derricks, drills, and the most improved labor-saving appliances are now being rapidly introduced. All the new companies are putting in plant of the most approved pattern, with the result of much greater economy in labor and greater capacity of output, which in this case also means largely increased profit. Further improvements are, however, urgently called for, and that very speedily, if the mining of asbestos is to be carried on at the maximum of profit. Some simple appliances by which the mineral, especially the shorter and poorer grades, can be separated without the tedious process of cobbing by hand, should be the earnest study of all interested in the business of mining, and what is at present of quite as much importance, especially in the case of those companies who have been at work for some years, is the necessity of getting rid of the huge and unsightly dumps which now cumber the good ground and limit very seriously the extension of operations as well as the profitable working of some of the pits now carried on.

There is no doubt that in the case of the Thetford mines these dumps cover some very rich ground, and the same remarks apply also to certain areas at Black Lake. The mining of asbestos at either place has not been of a highly scientific character, and during the visit of the American Institute of Mining Engineers to this section in Octo-

ber, 1889, many remarks of this character and as to the desirability of placing these mines on some more desirable basis for future successful operations were expressed. In particular the bad management of the dumping grounds was commented on. The removal of these, however, should not, if properly undertaken, be attended with any serious loss, and might even possibly be conducted with profit. It is well known that in the early years of the industry the separation of the smaller veins was not closely attended to. Large veins were plenty, and cheap and speedy extraction was a necessity, consequently much very fine fibre went into the lower part of these unsightly heaps of what is regarded as refuse. In fact, even in the newest portions of these dumps veins of asbestos ranging from half to three-quarters of an inch can be frequently seen, all of which should repay extraction if suitable machinery were employed. While in the present condition of most of the pits, veins of asbestos of large size, ranging from one to three or more inches, are common, the uncertain nature of the mineral is such that in view of the investment of hundreds of thousands of dollars at which many of these properties are now held, when any are placed in the market, the great desirability of testing the rocks at lower levels by some cheap but satisfactory method should be apparent to all interested, and not only so but on the part of an investor is almost a necessity. To the company investing many thousands of dollars in an asbestos property to-day, the chances of successful working, or of getting back their own with profit, depend very largely upon the continuation downward for a considerable depth of profitable veins; for while in the case of a property acquired at Government rates at \$1 per acre, the capital upon which dividends must be paid is very small, the case is very greatly reversed when a price of \$1,000 to \$3,000 per acre is demanded, and the cost of a plant sufficient to put such a property on a satisfactory working basis is added. This means a very different method of conducting mining opera-

tions, and a constant and sure source of supply for some years to come at least is a first requisite. The advisability of thus testing the lower portion of the serpentine has been pointed out in the Reports of the Geological Survey of Canada, and the use of the Diamond drill by which cores could be readily obtained at a very cheap rate from a number of holes, bored at different angles, advocated. The cost of boring such holes to a depth say of 150 to 200 feet should, when the machine is on the ground, not exceed fifty cents per foot, and should veins of asbestos reticulate through the rocks as plentifully at such depths as are now seen at the surface, their presence would, without doubt, be recognized in some of the holes.

As regards the present status of the industry, there are at present engaged in mining at Thetford no less than six companies, two new ones having commenced operations during the past season, viz. : Messrs. Lucke and Mitchell, of Sherbrooke, the Thetford Mining Company, the Beaver Asbestos Company and others. The low lying area between the railway and Thetford River has been proved to some extent by different parties, and while promising veins have been found at several points, these do not appear so numerous or so important as regards size and quality as those in the knoll at Thetford station. These areas should be thoroughly tested and their value ascertained before dumping grounds are located there, which may require to be removed again before long, since it is very possible that large and important veins may be concealed. On the property of Lucke & Mitchell several veins of very fine fibre, in thickness up to nearly two inches, are found in a portion of the low lying area, so that care is necessary in laying out the work for the future.

At Black Lake several new companies have taken up areas and commenced development work, preparatory to mining during the coming season. These are for the most part located contiguous to the line of the Quebec Central Railway to the south-west of the present workings, and adjoining the mine of the Anglo-Canadian Co. Among these new companies are the

St. Julie Mining Co. and the Laurier Mining Co., but in none of these has the development reached such a point as to enable one to pronounce definitely upon the success of the several undertakings. The works of the American Asbestos Co., on the high ridge south-east of the Black Lake station are, however, worthy of mention for the amount of work done during the past two seasons, and for the energy and system displayed, as well as for the good results already obtained. This mine is at the highest elevation of any at present worked. The plant is excellent, and the quality of much of the fibre very good, a fair proportion ranking No. 1. New workings of the Anglo-Canadian in the face of the high hill, which is about 350 to 400 feet above the railway at this point, also show excellent veins of asbestos, while in the pits of the United Asbestos Co., which acquired in 1889 the property known as the Frechette-Dauville mine, and which is intermediate in position between the Scottish and the Anglo-Canadian mines, some very fine "cotton" is obtained, the percentage of "firsts" from this pit during the past season probably amounting to over forty per cent. This mine is now thoroughly equipped with steam derricks, compressors, drills, &c., furnished by the Jenckes Machine Co. of Sherbrooke, who have lately made a specialty of mining machinery.

To the north-west of the Coleraine station, adjoining the area owned by the Megantic Mining Company operations have been commenced during the past season by W. H. Lambly & Co., of Inverness. Near the crest of the hill on which this mine is situated several very good veins are seen, but work has not sufficiently developed the property to ascertain the value of the lower cuttings. As in the case of the copper industry some few years ago, an asbestos boom will doubtless set in, and some of the many properties placed upon the market will furnish very poor returns to the investors. All is not gold that glitters, and all serpentine is not asbestos bearing. The folly of placing at greatly inflated prices, properties comparatively undeveloped, should be avoided in the interests of legitimate mining. While from certain standpoints

the prospective profits of asbestos mining may seem very large, the actual returns are not in all cases commensurate with the expectations. The figures quoted of prospective output and profit in several of the prospectuses which have lately appeared, can never be realized, since these figures are, to a large extent, based upon an exaggerated output of first quality, chimerical ideas which in the case of the properties mentioned can never be realized either for quality of fibre or quantity of production; and it should be the endeavor of everyone engaged in legitimate mining to discourage any attempts that may be made to flood the market with undeveloped and sometimes unprofitable areas, at figures which even the best producing mines at the present time would scarcely warrant. The profits from asbestos mining must very largely be obtained from the output of "firsts" and "seconds." There cannot at present prices be any great margin in "thirds," and still less on "waste," and as the percentage of "thirds" from some of the mines is nearly equivalent to half the output, the source from which profitable returns can be reasonably looked for is largely reduced. These proportions can readily be seen from the figures quoted in the last issues of the Geological Survey Reports, where the percentages of the different grades for the several localities are stated, as also in an excellent paper by Dr. Eells, on the mining industries of Eastern Quebec, read before the Ottawa Meeting of the American Institute of Mining Engineers, and published in the Transactions of that body.

The following have been the shipments of Canadian Asbestos from 1879 to 1890:—

Year.	Quantity. Tons.	Value. \$	Year.	Quantity. Tons.	Value. \$
1879. . . .	300	19,500	1885. . . .	2,440	142,441
1880. . . .	380	24,700	1886. . . .	3,458	206,251
1881. . . .	540	35,100	1887. . . .	4,619	226,976
1882. . . .	810	52,650	1888. . . .	3,936	277,742
1883. . . .	955	68,750	1889. . . .	5,588	360,144
1884. . . .	1,141	75,097	1890. . . .	7,000	Estimated at 1st Nov., '90.

The following are the leading Companies organised to work Canadian Asbestos, showing the authorised capital, and labor employed by each :—

Name of Company.	District.	Nationality.	Nominal Capital Stock.	Labor Employed. 1890.
American Asbestos Co.	Black Lake, Que.	German.	Private.	80
Anglo-Canadian Asbestos Co. (Limited) ..	Black Lake, Que.	British.	£20,000 stg.	80
Beaver Asbestos Co.	Coleraine, Que.	Canadian.	\$100,000	40
Bell's Asbestos (Limited) ..	Thetford, Que.	British.	*£200,000 stg	200
Brompton Lake Asbestos Co.	Brompton Lake, Que.	Canadian.	\$60,000	30
Johnson's Asbestos Co. (Limited) ..	Thetford, Que.	Canadian.	\$250,000	150
King Bros.	Thetford and Black Lake, Que.	Canadian.	Private.	200
Laurer Mining Co.	Black Lake, Que.	Canadian.	\$15,000	15
Megantic Mining Co.	Coleraine, Que.	Canadian.	\$250,000	....
Standard Asbestos Co. (Limited), ..	Elziver, Ont.	American.	\$100,000	Organised.
Thetford Mining Co.	Thetford, Que.	Canadian.	\$200,000	40
United Asbestos Co. (Limited) ..	Black Lake, Que.	British.	†£100,000 stg	80
White's Asbestos Co. (Limited) ..	Garthby and Coleraine (on lease).	British.	£100,000 stg.	50
Wolfestown Asbestos Co.	Wolfestown. Que.	Canadian.	Private.	....

*Total capital of company, which also manufactures asbestos extensively in Great Britain.

†The company also manufactures asbestos in England, and operates mines in Italy.

OUR GOLD FIELDS IN QUEBEC.

IN view of the increased interest which has of late been manifested in the mineral resources of the Province of Quebec, not only as regards the comparatively new mineral asbestos, in the production of which Canada may now be said to lead the world, but also in the development of large and new bodies of copper ore, the great value of which as a source of supply for acid is just beginning to be fully realized, it is a matter for enquiry why the gold fields of the Province, concerning which so much has in former years been recorded, should have failed to attract the attention which they so evidently deserve. For that in the Province of Quebec there exists a very large extent of territory containing rich deposits of gold, not only in the alluvions of its ancient river channels, but in many of the quartz veins which traverse the slates and sandstones of the Chaudiere and Ditton Districts, and of the whole belt of similar rocks which extend along the eastern portion of the Province contiguous to the boundary of New Hampshire and a portion of Maine, has been very conclusively established. One has but to take up the papers written on this subject by the late Mr. James Douglas, of Quebec, or to glance over the earlier reports of the Geological Survey, more especially those from 1847 to 1866, to see that in this area, the chances for profitable gold mining under suitable Government regulations and proper management, are unsurpassed by any other portion of the Dominion and possibly even by the adjoining States.

The evidence also presented before the Select Committee appointed by the Quebec Government in 1865 to consider the question of the Chaudiere gold field, while containing doubtless some statements bordering on the sensational, and therefore requiring to be cautiously accepted, present

such a mass of cumulative evidence, both on the part of skilled workmen in this field as well as from ordinary explorers, that we can but come to the conclusion that had such stories of the presence of gold in large quantity proceeded from any other section of the country than the Province of Quebec, the influx of gold miners and of capital would have almost equalled that of the palmy days of the Californian discovery.

The evidence presented in the different reports of the Geological Survey is also largely confirmatory of that stated by other writers on the subject; and yet in the face of all evidence tending to prove the existence of a gold field equally adapted for quartz mining, as shown by repeated assays from a number of leads, with that of Nova Scotia, and far surpassing that country in the value of its alluvial workings a feature in gold mining which has in Nova Scotia apparently never awakened any interest, we find not more than three or four companies, almost without capital, trying in a very small way and with the worst appliances and an almost entire lack of proper mining skill, to extract the gold from the ancient river channels, whose presence and richness have been known for twenty years, but which except in two or three widely separated cases, have never been explored to any extent.

The history of gold mining in the Province of Quebec has apparently from the very start been a huge system of blunders, and possibly the greatest, as it was the first, consisted in giving the entire control of all the gold found in the Seigniorship of Rigaud, Vaudreuil, on the Chaudiere River, and in which the richest developments yet found are located, into the hands of one person or family *forever*, and without any provision being made for the payment of royalty to the Government, since the clause inserted in the Letters Patent, and intended to cover this point, was so worded that it practically became inoperative; the royalty only being payable on such gold as was obtained by smelting the ore—a mode of working

gold which has never prevailed in this country in gold mining, and which most surely never will. By the *forever* clause in the lease the outside public are entirely debarred by the Government from taking any part in mining or exploration in this section of the province, except by permission of the owners of the Seigniori. But this is in turn prohibited, since in 1864 the De Lery Company, who derived their patent direct from Government, sub-let their entire mining right to the De Lery Gold Mining Company for a term of thirty years, so that until the second ownership expires no work can be done in the Seigniori by outside parties without direct permit from the second company. The effect of all this is very evident. While the company is apparently quite willing to grant mining leases to any person desirous of working gold mining claims in any part of their territory, there is a very well founded objection on the part of those contemplating investment in this direction to advance the capital necessary for the erection of permanent works on a large scale by which the extraction of the gold can be most profitably carried on, owing to the insecurity of tenure existing under the present regulations. Works adapted to the requirements of the case mean the construction of reservoirs for permanent storage of water to meet the possible requirements of a dry season, extensive flumes or ditches for the conveying of such water when required, properly prepared grounds and appliances for washing the gravel and collecting the gold when separated; in fact, a somewhat extensive plant. This, with a prospect that in a very few years their lease must of necessity expire, and if good results are obtained, an almost absolute certainty of non-renewal from the original company on any terms which would permit of profitable mining, has effectually placed a bar to all possible chances of development in this direction. Here, then, is one of the principal causes why capital does not at present flow into the Chaudiere district, rich as it is in gold.

As regards the second gold mining area, which, according to the most reliable reports, is in many respects equally

as valuable as the Chaudiere, though not nearly so extensive, we find that, in a lucky moment for the proprietor, but an unlucky one for the Government of Quebec, the whole right and title to some 6,000 acres of the country, including mineral rights as well, has also passed *forever* into the hands of a private individual, and is, if anything, even more securely locked up in so far as the investment of capital is concerned, than the other.

The history of gold mining in Quebec, from the first discovery, sixty years ago, furnishes reading, not only of great interest, but of a kind from which good sound practical lessons may be derived. The first vein of gold found in 1836 was valued at from \$50 to \$60; a very fair sized nugget for any country, and sufficiently large, one would suppose, to warrant anyone interested in gold mining to make further and vigorous search; yet for nearly fifteen years but little attention seems to have been paid to it, further than in the securing in 1846, by the DeLery family, of the mining rights already referred to. From 1850 to 1860 desultory mining operations were carried on at a number of points by various parties. Some exceedingly rich pockets were found on the Des Plantes and the Gilbert, as well as on the main Chaudiere River, while a series of trials at the forks of the DuLoup in 1851-52, extending over one acre of gravel from the bank of the stream with ordinary appliances only, showed a margin of profit sufficient to warrant anyone in investing the capital necessary to make a speedy and abundant fortune should the proper appliances be used. The amount of the gold obtained from this acre of gravel was considerably over \$4,000—the profit considerably over \$1,000. The results of these trials are given in the report of the Geological Survey for those years, and being official may be taken as reliable. Yet, owing to some dispute with the proprietor of a neighboring Lot, the work which promised so well had to be abandoned, and nothing further was done in this quarter for nearly thirty years. It is unfortunate that the next attempt to

extract the gold from the gravels of the DuLoup in 1879-80 should not have been undertaken by some one with even a slight pretence to mining knowledge so that the most fitting plan for successfully carrying on the washing of the gravels, and what is equally important the collecting of the gold afterward, might have been adopted, but instead we find a very large amount of money, aggregating many thousands of dollars, placed in the hands of a person who certainly, from his previous occupation, could not be supposed to have acquired much practical or scientific knowledge of the best means to be employed in the extracting of the gold. A trench eleven miles in length was dug along the banks of the River DuLoup for conveying water for the hydraulic process, and a magnificent head of about 150 feet was obtained, sufficient to tear down the gravel banks at any desired rate, but very slight provision appears to have been made for collecting the gold, either coarse or fine, after the bank was torn down; though from the trials made in 1852 it is known that there was sufficient in every cubic yard to have paid most handsome dividends, even by the old rocker method of washing. Under such management it can scarcely be a matter of wonder that the costly experiment was a failure of the worst kind.

A second attempt to work an old channel near the village of St. George was equally disastrous to those engaged, though the outlay was on a greatly reduced scale, the management being the same. Four shafts were here attempted before bed rock could be reached, the operations extending over a period of several years, the last and final attempt requiring nearly twelve months to sink 165 feet. This surely implies engineering skill of a wonderful kind.

In the work on the Gilbert, where exceedingly rich ground was found in 1863-64, the mining also was of the crudest kind. The claims allotted were very small, water could not be obtained for washing the gravel properly, and there appear

to have been no proper appliances for saving the fine gold. A sluice 1,800 feet long, built at a cost of about twelve thousand dollars, to bring water from the upper part of the stream, which had been dammed for that purpose, was destroyed before it could be utilized, simply through lack of proper precautions in its construction; yet here, in the face of all these adverse circumstances, gold was obtained in large quantities, so that four men, working under the greatest disadvantages, are said to have taken out nearly \$80,000 in less than four years. Anyone visiting the workings as conducted at the present day must wonder how any gold except the coarsest can be saved at all. Sluices of very slight pitch and of insufficient length, are unfitted with any proper means for saving the fine gold, the greater part of which must of necessity be carried away down the stream with the tailings. The only mining skill observed is on the part of these who have used the pick and shovel in some former enterprise in the vicinity, and yet, gold in good paying quantities continues to be obtained, simply because much of the gold in the district is coarse, and nuggets of ten to one hundred dollars are not uncommon, while others having a weight of nearly sixty ounces have been obtained.

Such coarse gold does not travel far, yet no practical attempt to test the quartz leads by milling has ever been made, except by one ill-starred crusher, so faulty in construction that when free gold was put in none ever could be extracted. Yet, in spite of all these well known facts, when the value and importance of the gold fields of Eastern Quebec are mentioned most people calmly shrug their shoulders and smile incredulously. Why? Because most people are content to take the results, or rather the lack of results due to stupid blundering and ignorance of the first principles of mining, properly so called, as a satisfactory and conclusive test of the true value of the entire district.

There is no doubt, as can be proved by the evidence furnished both from official reports and from other sources,

that in nearly, if not in every stream, tributary to the Chaudiere above St. Joseph, gold can be obtained in paying quantities with material of the right sort and a knowledge of the conditions involved.

The gold mining of to-day should be understood far better than that of twenty years ago. In the Nova Scotia gold fields the mistake of sinking shafts in unprofitable lodes is not now made so frequently as in the first days of the industry in that Province, simply because certain laws apparently exist which govern the distribution of the metal. Scientific skill is now producing profitable returns where twenty years ago bad management and utter ignorance on the part of those in charge of valuable mines squandered capital by the hundreds of thousands of dollars. The crude style of gold mining has also surely lasted a sufficiently long time in Quebec. But until some provision is made on the part of the local Government by which the titles so long ago obtained can be extinguished and these areas thrown open to the advent of outside capital, there does not appear to be much chance of permanent improvement in this direction. Should the Government of Quebec acquire once more the titles to the mining rights of the province in gold, and proclaim the districts of the Chaudiere and the Ditton mining districts, with proper regulations as to title, size of claim, royalty, etc., there is not the slightest doubt that capital, to almost any desired amount, would pour in for the development of this great industry. In the present condition of mining in Quebec, with its great deposits of apatite, copper, asbestos, iron, gold and silver, one would suppose the establishment of a well organized mining bureau would be a prime necessity, not only conferring great benefit upon the province at large but bringing in also a very considerable direct revenue to the Government. The little Province of Nova Scotia has long felt the benefit arising from such a bureau, and certainly with proper management, Quebec, with her far greater variety and abundance of mineral wealth and her

immensely greater area, would derive not only equal but far greater results from the establishment of such a department. The mining industries of Quebec are but in their infancy. No one can say to what enormous proportions they may in the next twenty years extend. Foreign capital is awaiting investment to-day in many lines, but is restrained from entering, in some cases by the unfavourable conditions which are known to prevail. Surely the time is not far distant when these conditions will be changed, and when the gold mines of Ditton and the Chaudiere, freed from the incubus that has so long stifled their development, will be teeming with a mining population whose labors will be properly directed and whose rewards will be sure. May the happy time come right speedily.



GOLD MINING AS AN INDUSTRY IN NOVA SCOTIA.

THE gold mines of Nova Scotia have had many ups and downs during the thirty years which have elapsed since the first discovery of gold in Tangier in 1860.

As an industry, the business may be said to date from 1862, when most of the older districts were proclaimed by the Government, a "Chief Gold Commissioner" was appointed, and laws were framed governing the acquisition and working of gold bearing lands.

During that year several quartz crushing mills (some thirty in number) were built, of types varying from the arrastra, and its offspring the Chilian mill, to the stamp batteries of that date. No royalties, however, were collected by the Government until the year following.

From the year 1862 dates also the wild excitement consequent upon the inception of mining works in many and distant sections of the Province; an excitement which was in part due to the richness of the gold streaks which were found cropping to the surface; in part due to the schemes of both English and American speculators, and also in part due to the misapprehension of the value of the fields thus discovered.

This excitement culminated in 1867 and 1868, when the inevitable leaner or poorer portions of the lodes began to predominate, because of lack of development, and when shareholders began to realize that their extravagant expectations of dividends were doomed to disappointment.

This reaction was natural and inevitable when the mines were managed by men not trained to mining and entirely unfamiliar with the business. Large losses occurred in milling, and the peculations of the workmen at that time were not inconsiderable. Thus when these lower grade spots were encountered profits temporarily ceased, there being no

development of the veins ahead and consequently no body of reserves to fall back upon, and but too often no treasury fund to pay for development work. Of course, primarily the cause of all this was the incapacity and inexperience of the then managing men, but another reason contributed largely to the same effect, and that was the idea (promulgated, it is said, by a Mr. Thomas Beet), that no lode would be found to be auriferous below depths varying from 100 to 200 feet. This notion seems to have been borrowed or transplanted from Australia, where the same idea was prevalent from 1865 to 1875. The notion is so absurd as to need no refutation.

Then followed a period of general depression, and, amongst capitalists, a great distrust of Nova Scotia gold properties. From 1871 to 1882 the production and the number of men employed fell off greatly, in some years to the extent of more than one-half. During this period of ten years the production was maintained chiefly by the discovery of new districts and the finding of one or two rich veins in some of the older districts. Unfortunately, however, experience had not taught wisdom, and these later discoveries were worked in the same systemless manner that the earlier mines had been, and of course with the same results. No mine being opened in a systematic manner, as soon as its rich quartz was all extracted from the surface workings it was posted as "worked out" and was abandoned.

In 1883 and 1884, however, several attempts were made by men of experience and training in other countries to reopen and work some mines which had been idle and filled with water for ten or fifteen years. These attempts were successful, and from the year 1885 dates a new era or epoch in the gold mining industry of Nova Scotia. In that year the annual production exceeded the average annual production by 7,000 ounces, and last year (1889) the production was nearly 10,000 ounces in excess of the average annual production.

In the following table is given the production of gold for each year from 1862 to 1889 inclusive, also the number of tons of stone crushed and the average yield per ton for each year:—

Year.	Total ounces of Gold.			Stone Crushed.	Yield per ton of 2,000 lbs.		
	Oz.	Dwt.	Grs.	Tons.	Oz.	Dwt.	Grs.
1862.....	7,275	0	0	6,473	1	2	11
1863.....	14,001	14	17	17,002	..	16	11
1864.....	20,022	18	13	21,434	..	18	16
1865.....	25,454	4	8	24,423	1	0	20
1866.....	25,204	13	2	32,162	..	15	2
1867.....	27,314	11	11	31,386	..	17	9
1868.....	20,541	6	10	32,262	..	12	17
1869.....	17,868	0	19	35,147	..	10	4
1870.....	19,866	5	5	30,829	..	12	21
1871.....	19,227	7	4	30,791	..	12	11
1872.....	13,094	17	6	17,093	..	15	7
1873.....	11,852	7	19	17,708	..	13	9
1874.....	9,140	13	9	13,844	..	13	5
1875.....	11,208	14	19	14,810	..	15	4
1876.....	12,038	13	18	15,490	..	15	13
1877.....	16,882	6	1	17,369	..	19	10
1878.....	12,577	1	22	17,990	..	13	23
1879.....	13,801	8	10	15,936	..	17	8
1880.....	13,234	0	4	14,037	..	18	20
1881.....	10,756	13	2	15,556	..	12	20
1882.....	14,107	3	20	22,081	..	12	18
1883.....	15,446	9	23	25,954	..	10	21
1884.....	16,059	18	17	25,147	..	12	18
1885.....	22,203	12	20	28,890	..	15	4
1886.....	23,362	5	13	29,010	..	16	2
1887.....	21,211	17	18	22,280	..	19	11
1888.....	22,407	3	10	36,178	..	15	21
1889.....	26,155	6	13	39,160	..	17	22
Total	482,316	16	21	650,442			

The five years since 1885 have been marked by the successful opening of old and previously abandoned mines in nearly all the older districts in the Province; by the introduction of modern mining and milling machinery, and by greatly improved, systematic and scientific methods of mining and exploitation. To develop your mine is now considered the "correct" and necessary thing, but the writer well remembers being laughed at in 1884 by one of the "old timers" when

he intimated his intention of opening up a mine by sinking driving levels and opening up for backs and reserves. And last, though by no means least, this period has been marked by the disappearance of distrust amongst capitalists, and by the attraction of foreign capital to our gold fields as being ventures in which money can be profitably invested.

In most cases this investment has proved profitable, but in one or two cases, which derive prominence from their rarity, money has been paid for properties which were valueless from the start, or a management has been appointed whose incompetency doomed the enterprise to failure from the beginning. In almost every case where ordinary business prudence has been exercised in the selection of a property, or in the choice of a manager, success has been the result and not failure.

The gold bearing quartz lodes of Nova Scotia occur in Lower Silurian measures, and belong chiefly to the class of "bedded" lodes, or perhaps are "ore deposits along bedding planes," being conformable throughout with the beds of quartzite and slate with which they are interstratified.

Two other classes of auriferous deposits are more seldom met with: (1) "Fissure" veins, so called, being in some cases true fault fissures subsequently filled in, but more frequently being filled crevices which were occasioned by secondary disturbances; (2) intercalated or "gash" veins of local origin and extent.

By far the greater bulk of the gold produced has hitherto come from the regular or "bedded" lodes. Sometimes these bedded deposits take the form of large inter-stratified belts of bluish fissile slate in which occur intercalated veins of quartz, thus forming large bodies of low-grade ore upon which, in the opinion of the writer, the future of the industry will largely depend. The districts of Goldenville, Beaver Dam and Mount Uniacke afford the best examples of this class of deposits.

The regular lodes vary, as a rule, from two inches to thirty inches in width, instances occurring where the lodes

thin down to a fraction of an inch, or swell to twenty-six feet wide, as notably in the famous Dufferin lode on Salmon River. The average width may be taken as from six to twelve inches, all quartz.

The richness of these lodes varies as much as their width does, running from \$3 to \$1,000 per ton. The general average of each year is shown in the table on page 41; the average for the twenty-eight years is about \$14 per ton.

Upon lodes of such variable width and nature the cost of production will, of course, also vary widely, but as a general guide it may be stated that a lode twelve inches wide, yielding \$10 to the ton, will pay well to work.

There are at the present time over thirty-five localities in the Province in which workable deposits of gold have been found, and from three thousand to four thousand persons are dependent to a great extent, or entirely, upon the industry. The area of the gold measures in Nova Scotia has been estimated by various authorities to be from five thousand to seven thousand square miles, or from one-fifth to one-third the area of the Province, yet the actual area from which the gold thus far obtained has been won is less than forty square miles. Taking the total value of the whole gold product to the first of the present year as \$9,000,000 in round numbers, it will be seen that each square mile of surface upon which paying gold lodes have been found has yielded over \$8,000 per year for each year since discovery.

The mining laws of Nova Scotia are, in the main, good, and are yearly being amended for the better. Their essential features are:—

1. All mines of gold and silver are the property of the Crown, from which titles or leases are obtained for working the same: all gold obtained is subject to a royalty of two per centum, or thirty-eight cents for each ounce of smelted gold.

2. Lands containing gold or silver are laid off in areas measuring 150 feet by 250 feet, the lesser length being along

the course of the lodes, and a lease can be obtained for any number of areas in any such one lease up to one hundred.

3. Such a lease runs for twenty years, and costs the applicant two dollars for each and every area contained therein. Upon each such lease in each year there must be performed a certain number of days' work, or, as an equivalent, the lessee is given the option of paying annually fifty cents for each area therein contained. Such labor being performed or such annual payment being made the lease is non-forfeitable. At any time prior to the expiration of said twenty years the holder of the lease can surrender it and obtain a new lease for a second period of twenty years. Such a lease is deemed personal property and is transferable.

4. Where such areas are situate upon private lands the law requires that an agreement must be made with the owner of the soil for leave to enter, and if such agreement cannot be made a method of arbitration is provided whereby damages may be assessed, paid in, and leave given to enter to the owner of the lease.

Examination into the history of any mineral industry will show that such industry has only reached its full development and highest point through a complete knowledge of the methods and processes peculiar to that industry, and applying this standard to the gold mining industry of Nova Scotia, one is warranted in saying that its outlook was never more promising. There is to-day a greater amount of professional knowledge and technical skill engaged in gold mining than ever before. The lodes are being worked with ability and with that wise economy which avails itself of every known device to save labor and cost; and also with the introduction into every day matters of true business methods, for it must not be forgotten that a gold mine is a manufactory of gold which must be conducted, even to its minutest details, with the most jealous regard to economy in all departments.

The easy means of access to the Province, and con-

venience of personal examination, the low costs of working, the cheapness of labor, fuel and supplies, the probable permanent nature of the bedded lodes, as inferred from their geological structure, are all good and sufficient reasons why capital should seek investment in the gold mines of this Province.

With experienced and honest management, suitable and economic plant, and a working capital sufficient to open and exploit a property which has been carefully examined and selected, such an investment should prove a safe, lucrative and reasonably permanent one.

JOHN E. HARDMAN, S.B.,



COAL AND IRON IN NOVA SCOTIA.

THE presence of coal and iron ore in Nova Scotia has long been known. Early explorers saw coal seams naturally exposed in the Joggins and Cape Breton cliffs, and their errant compasses showed at many points the vicinity of iron ores. At first the abundant forests furnished a fuel far cheaper than coal, consequently for many years little mining was done, and almost all the coal that was quarried from the natural exposures of the seams was burned as a luxury by the people in the towns, and by the garrisons. In "Canada" iron smelting was carried on over two hundred years ago, but it was not until the first quarter of this century was reached that systematic mining may be said to have commenced here. At this date the General Mining Association of London commenced mining, and opened collieries at Sydney, in Cape Breton, in Pictou Co., and at the Joggins, in Cumberland Co. In 1827, the sales were 12,419 tons, and in 1858 they reached 226,725 tons.

It may be remarked that the Crown of England had granted to the Duke of York a sixty year's lease of all the minerals in the Province not already granted in the Crown lands, which he had transferred to this company. As the Province grew this monopoly was felt to be a burden, and in 1858 an agreement was reached by which the monopoly was terminated, the company retaining nearly fifty square miles of valuable coal lands, and the Government throwing open to the public the varied mineral wealth of the Province.

A number of coal mines were promptly opened in Pictou and Cape Breton Counties, and in 1860 the sales were 322,593 tons. At this time there was no duty on coal imported into the United States, and the civil war involving the use of large amounts of coal, the sales reached 596,418 tons in 1871. The sales in 1876 were 634,207 tons. Since that date they

have increased to 1,555,107 tons in 1889. Of this amount 678,321 tons were sent up the Gulf of St. Lawrence, 509,905 tons were used locally, 30,198 tons were sold in the United States, and the balance in the Maritime Provinces. This year there is reason to believe that there will be a marked increase in the sales.

The coal mines are the property of the Province, and are leased on a nominal rental, which is refunded if royalty be paid, and coal mined. This royalty is at the rate of 75 cents on each ton of 2,240 lbs. sold. A Mines Regulation Act is enforced, certificated mine officials are required, a labor arbitration, instruction in mining, night schools, etc., are provided by the Provincial Government.

At present there are many localities believed to hold coal outside those already worked, and lessees of coal areas are willing to sub-let on reasonable terms. It is expected that the development of iron and copper smelting in Cape Breton, and the completion of the Pictou Iron and Steel Works, and the enlargement of the Londonderry operations will shortly give a decided impetus to coal mining. The coals of Cape Breton have proved, in experimental ovens, to be of good coking quality, and at Cow Bay the manufacture of coke is regularly carried on. The Pictou and Springhill cokes have long been used successfully in the Londonderry furnaces. The local, domestic and railway consumption is steadily increasing. The replacement of the coastal packets by steamers, and the opening up of new local steamship routes, etc., have all combined to give the coal trade a steadiness unknown a few years ago, when the mines were largely depending on their export business.

The following table shows the coal trade by decades :—

	TONS.
1801 to 1820.....	91,527
1821 to 1830.....	140,820
1831 to 1840.....	839,950
1841 to 1850.....	1,533,798
1851 to 1860.....	2,399,319
1861 to 1870.....	4,927,339
1871 to 1880.....	7,317,430
1881 to 1889.....	12,124,025

The sales for the year 1889 are as follows, and give a general idea of the trade for some years past :—

	TONS.
Nova Scotia.....	550,425
New Brunswick.....	195,174
Newfoundland.....	87,543
P. E. Island.....	54,940
Quebec.....	631,796
West Indies.....	3,983
United States.....	29,986
Other countries.....	1,260
	1,555,107

The Departmental returns show that 5,167 men and boys were employed about the coal mines last year, and that fifteen collieries were in operation, the largest output, 425,149 tons, being from the Springhill mines, Cumberland County.

Iron Ores of Nova Scotia.—Hitherto the development of this important mineral resource has received little attention. Some years ago charcoal iron of very excellent quality was made at Londonderry, and then the manufacture of steel undertaken by an English company. At present, however, the two large blast furnaces are run on an excellent quality of pig iron, and besides the supply of the general foundry trade, large amounts of angle, bar iron, etc., are made, and an extensive foundry is in operation. Last year the works consumed 43,000 tons of ore, 17,363 tons of flux, 35,565 tons of coke, and the Intercolonial Railway delivered at Londonderry Station 75,187 tons of coal. Arrangements are being made for a much larger business next year.

The ores met in this Province are magnetite, hematites of several varieties, limonites, spathose and bog ores. They form an irregular band extending along the Cobequid Mountains and the Annapolis Valley, and uniting in the vicinity of Truro, pass through Pictou, Antigonish and Guysboro' Counties to the Strait of Canso. In the Island of Cape Breton little has yet been done to test the extent of the iron ore deposits, but enough work has been done to show that there are numerous deposits, important from their size and quality.

In Pictou County these ores occur in unusually large deposits, and embrace almost every known variety. The extent of the iron ore field is measured by many thousands of acres. The New Glasgow Iron, Coal and Railway Company have, during the past two years, systematically tested many deposits in this county, and have commenced regular mining operations. A route for a branch railway has been surveyed from the Intercolonial Railway, subsidies promised, and next summer will see the construction of this important feeder. The construction of two large blast furnaces and commensurate steel works have been arranged for.

The deposits of Brookfield, Torbrook and Pictou are now furnishing cheap and excellent ores to Londonderry, and the way is being prepared for a development of iron ore beds for exportation and for local use to an extent little known even in the Province. As some of the deposits are situated in heavily timbered localities, advantage is being taken of the opportunities offered for the manufacture of charcoal iron.

The Nova Scotia Steel and Forge Company, who have large works near New Glasgow, have been doing for some years past a flourishing business, and their last year's work yielded a 12 per cent. dividend. Their output last year was 13,000 tons of finished steel and iron, and gave employment to about 420 men. Their plant comprises: two open hearth Siemens-Martin melting furnaces, two regenerative gas heating, and eight reverberatory heating furnaces. There are also five hammers, five rolling mills, nine pair shears, besides planes, lathes, drills, hot and cold sawing machines, etc., supplied with steam from twenty-two boilers.

These brief notes will serve to show that the statements made that there is an unlimited supply of iron ore of every variety and quality are warranted by the facts. These deposits are in most cases advantageously situated for transport by rail or by water. That the coal fields are extensive, and only in part developed; that the present and contem-

plated railway facilities afford ample opportunities for the conjunction of ores, fuels and fluxes. The tenure of mineral lands from the Government is reliable and effected on easy terms.

During the past two years the attention of English and American capitalists has been directed to Nova Scotia as containing in an unusual degree the requisites necessary for the successful manufacture of steel and iron, and large investments have been made with this end in view. This demand has stimulated search and prospecting, and new finds of iron ore and coal are continually reported, so that the visible supplies of the raw materials promise that Nova Scotia will become the great workshop, not only of the Dominion of Canada, but of a great part of the United States.



THE CANADIAN MINING MANUAL

ALABAMA HYDRAULIC GOLD MINING CO.

A private Company, organized in 1878, and composed of the following Shareholders :—

Joseph Mason, M.P.P.,	
William Williams,	T. H. Flynn,
John Lanyon,	M. Driscoll.

Head Office, Barkerville, B.C.

T. H. Flynn, Superintendent.

Formed to work an alluvial claim five acres in extent, and situate on Mosquito Creek, in the Cariboo district, Province of British Columbia. Eight men employed. Gold dust to the value of \$35,000 has been taken out to date.

ALBERTA RAILWAY & COAL CO.

Incorporated 20th March, 1889. Authorised Capital, - \$300,000.

Head Office :

37 Old Jewry, London, England.

Formed to take over and control the lands, works, mines and railways formerly owned and operated by the North Western Coal and Navigation Company, (Limited). The Company owns the Lethbridge Collieries, at Lethbridge, in the Province of Alberta, in the North-West Territory, and has constructed and now operates a line of railway running from the main line of the Canadian Pacific Railway at Dunmore to Lethbridge, a distance of 110 miles, and from Lethbridge to the International Boundary, 65 miles, from which it is continued to Great Falls, Montana, a further distance of 133 miles, or an aggregate mileage of 308 miles. The production of coal from the Company's mines, since 1st January, 1890, to 1st October during the same period, has averaged 11,000 tons per month; 650 men and boys are employed. The workings comprise 9 double drift entries, extending on an average 2,500 feet from face of bank, with necessary chambers leading therefrom; 3 shafts, 280, 270 and 300 feet deep respectively; system of working, pillar and room.

General Manager, G. H. R. Wainwright, Lethbridge, N.W.T.

ANGLO-CANADIAN PHOSPHATE CO. (Ltd.)

Registered 26th February, 1886.

Capital Stock, Nominal.....	£100,000.
Subscribed, Preference Shares.....	46,000
Deferred.....	25,000

Directors :

Capt. Robert Adams, Montreal.	J. T. Henderson, London.
J. C. Reid, London, Eng.	J. J. Reid, London, Eng.

Head Office, 41 St. Francois Xavier Street, Montreal, Que.

The company controls about 3,000 acres of mineral lands in Ottawa County, Que., and about 3,750 acres in Ontario, chiefly in North Burgess. Since 1888 it has discontinued work in the Province of Quebec and has been operating the Bobs Lake mines in Bedford, Ont., and the Otty Lake mines and Black Lake mines in North Burgess, Ont. In 1889 the Bob's Lake mines were acquired by Messrs. Lomer, Rohr & Co., and they are now worked under this firm's management. The Preference Shares rank first for 7 per cent. and after that rate has been paid on the deferred shares, both classes rank equally on surplus profit. This preference ceases when the aggregate dividends paid on that part of the capital amount to 50 per cent. Accounts to 30th November submitted in May. No dividend yet on either class. Debit to profit and loss on November 30th, 1889, £4,744 stg. The total output of phosphates of all grades, to 1st Oct., 1890, has been about 7,000 tons.

ANGLO-CONTINENTAL (Late Ohlendorffs) GUANO WORKS CO., HAMBURG.

The Capital is 16,000,000 marks in fully paid shares of 1,000 marks. The accounts are made up annually to December 31st, and submitted in Hamburg in April.

London Offices :

W. H. Hutchinson, Secretary, 15 Leadenhall Street, London, E. C.. England.

This company purchased in 1889, from Mr. A. F. McIntyre, Ottawa, the Aetna and Squaw Hill Phosphate properties, consisting of some 200 acres, situate in the 12th Range of Buckingham, in the County of Ottawa, Province of Quebec. 100 men employed at 1st September, 1890. The machinery plant at that date included :—Aetna Hill : steam hoist, sawmill and steam drills. Squaw Hill : horse whim hoisting gear, tramways, cobbing house, etc. A more extensive plant including additional hoisting engines, rock drills, crushers, etc., will be put in during the year. Boarding houses, stores, cottages for married men, buildings for offices, etc., are in course of construction. A tramway from mines to wharf at river bank will be constructed in the spring of 1891. It is estimated that the production of phosphate for the year ending 31st December, 1890, will amount to 2,000 tons of a proportion of $\frac{3}{4}$ No. 1. test, and the remainder of a lower grade. The company also controls the mining rights over a property containing 100 acres in the Township of Derry, County of Ottawa aforesaid,

Mine Superintendent, J. B. Smith, M.E., Glenalmond, P.O. Que.

ASBESTOS MINING & M'F'G. CO. OF CANADA.

Incorporated 8th May, 1883. Authorized Capital, \$100,000, divided into 20,000 shares of a value of five dollars each.

Directors :

Hon. J. Blanchet, Quebec, Que.		Hon. Geo. Irvine, Quebec.
Col. W. V. Hatchings, Boston, Mass.	|	A. Tarleton, Boston.
L. N. Carriér, Levis, Que.	|	Wm. Roberts, Boston.
James King, Quebec.	|	

Head Office : Quebec, Que.

Formed to mine and manufacture asbestos and its products. Not in active operation

AUSTIN MINING CO. (Ltd.)

Incorporated 27th May, 1882. Authorized Capital, \$250,000, divided into 50,000 shares of a par value of \$5.00, of which 12½ per cent. has been subscribed and paid up.

Directors :

H. K. Egan, Ottawa.		J. C. Browne, Ottawa.
W. A. Allan, do	|	J. A. Gemmill, do

Head Office : J. C. Browne, Secretary, 26 Sparks Street, Ottawa, Ont.

The property owned by this Company contains 600 acres of land in fee simple, and is situate at Echo Lake, about 25 miles distant by water from the town of Sault Ste Marie, in the Province of Ontario. Workings have been entirely of a prospecting character. Negotiations for the transfer of the property were being made at 1st October, 1890.

BAY OF FUNDY RED GRANITE CO.

Incorporated 14th April, 1873. Capital Stock, \$200,000, in 2,000 Shares of \$100 each, fully subscribed and paid up.

Directors :

A. Milne,		W. Coutts,		J. D. Chipman,
J. Wati,	|	C. Johnson, Jr.,	|	J. T. Whitlock,

Head Office : Alex. Milne, Secretary, St. George, N. B.

This Company owns 2,000 acres of land, and operates quarries of Red Granite at a point three miles from the town of St. George, Charlotte County, in the Province

BAY OF FUNDY—Continued.

of New Brunswick. The works are situated a short distance from the main street of the town, on the eastern bank of the Maguadavie River, immediately over the falls (from which is derived the water power), and cover an area of over an acre. The buildings include a polishing shop, granite-cutting shop, blacksmiths', machine and pattern shops, offices, etc. The machinery was imported from Scotland, and has all the latest improvements: it consists of two carriages or car-machines, four pendulums, one boring machine, four lathes, etc., etc. This plant will polish over 200 superficial feet per day, exclusive of moldings. The water-power is conveyed to the flume by a pentstock, a Leffell turbine wheel (4⁹" dia.) at the bottom of the flume, giving a motive power equal to 200 h. p. The average yearly output from the quarries is 550 tons. Eighty men employed.

Quarrymaster: W. Coutts, St. George, N. B.

BEAVER ASBESTOS CO. (Ltd.)

Incorporated 1890, under Letters Patent from the Local Legislature of the Province of Quebec. Capital Stock \$100,000, in shares of \$100 each. Fully subscribed and paid up.

Directors:

R. H. Martin, New York.
Col. Lucke, Sherbrooke.

Jas. S. Mitchell, Sherbrooke.
H. J. Williams, Thetford.

Head Office: J. W. Woodside, Secretary, Sherbrooke, Que.

Formed to acquire and work asbestos and other mineral lands in the Province of Quebec, more particularly Lots 31, 32, Range C, Coleraine, in the County of Megantic, Quebec. Operations to date have been largely of the nature of development. Production to 1st July, 1890, 60 tons. Forty men employed. Mines equipped with 35 H. P. boiler, steam drills, hoisting and pumping gear.

Mine Superintendent: H. J. Williams, Thetford, Que.

BEAVER MINING & MILLING CO.

A private Company.

Principal Owners:

Gen. Russell A. Alger, Detroit, Mich. | Col. F. J. Iecker, Detroit, Mich.

Head Office: Murillo, Ont.

This, one of the principal silver producing companies of the Dominion, was organized in November, 1887, and is the owner of Lots 97 T, 141 T, 95 T, 142 T, 155 T, 146 T, 57 T, 149 T, in the Township of O'Connor, and other mining locations in the District of Algoma. It is estimated that the value of the ore and bullion mined and shipped to 1st July, 1890, will exceed half a million dollars. 10 stamp mill, of a daily capacity of 25 tons; Burleigh compressor; steam rock drills; 1 Lane patent hoist, etc., etc. Some 75 men are employed. The mine buildings comprise boiler house, machine shop, air compressor house, hoist-house, blacksmith and carpenter shop, pump house, etc. The mine is 29 miles S. W. from Port Arthur. Work goes on day and night, except Sunday, in two shifts of 10 hours each.

Mine Superintendent: Thos. Hooper, Murillo, Ont.

BELL'S ASBESTOS CO. (Ltd.)

Registered 4th May, 1888. Authorized share capital £200,000 in shares of £5, half of which has been allotted and paid up in full.

Directors :

John Bell,	|	F. C. Bell,
H. A. Bell,	|	A. J. Burnett,
R. S. Guinness,	|	T. Lightfoot.

Head Office : J. Lauder Maclaren, Secretary, Southwark, London, S.E.

Formed to take over the business of Messrs. John Bell & Son, and to buy and work the freehold deposits of asbestos at Thetford, Hayden and Belmina, in the Eastern Townships of the Province of Quebec. The Company is reported to have purchased the Belmina estate from the firm at £8,394, Thetford at £41,300 and Hayden at £8,000. Accounts to December 31st, submitted in January. Dividend for 1888-89 22½ per cent. each year. The shares are redeemable by 1913 by annual drawings at 115 from a sinking fund. The production from the mines during the year 1889 was :—

No.		Tons.
I	crude.....	1,200
II	do	200
III	do	400
Total Exports.....		1,800

The mines are well equipped with an excellent working plant, including Nowell compressor, rock drills, Blake pumps, Copeland and Bacon winding engines, derricks, etc., etc. About 200 men and boys are employed.

General Superintendent : Thos. Sheridan, Thetford, Que.

BONANZA MINING CO.

A private company consisting of the following :—

Owners :

J. McB. Smith.	|	Henry Harvey.
F. Soues.	|	P. H. Ward.

Head Office : E. Bell, Secretary, Clinton, B.C.

This company owns and operates 6 locations 1,500' ÷ 600', or 120 acres in all, situated 8 miles from the town of Lillooet, in the district of Lillooet, in the Province of British Columbia. During the year 1889 a tunnel had been driven to a distance of 200', but without valuable results.

BOSTON COAL MINING CO.

Incorporated, 12th April, 1877. Authorized Capital, \$100,000 divided into 4,000 shares of a value of \$25.00 each.

Directors :

John Pearce, *President*.
 John E. Blakemore. | James Needham, Jr. | Benjamin Bradley.

Head Office : J. Needham, jr., *Secretary*, West Roxbury, Mass.

This company held some 2 square miles of coal areas in the County of Cumberland, under lease from the Government of Nova Scotia, but having failed to comply with the terms of their agreement, the said areas were declared forfeited, in September, 1890.

BRAS D'OR LIME CO. (Ltd.)

Incorporated, 17th July, 1888, under Letters Patent from the Government of Nova Scotia. Capital \$50,000, in shares of \$10.00 each, of which, to 1st August, 1890, \$47,100 had been subscribed and paid up.

Directors :

C. F. Fraser, Halifax, *President*.
 W. C. Delaney, Halifax. | Hy. Saunders, Halifax
 E. H. Keating, Halifax. | H. Clarke, Halifax.

Head Office : A. Milne Fraser, *Secretary*, 161 Hollis Street, Halifax, N.S.

The company owns some 6,200 acres, freehold and also under lease. From the quarries at Marble Mountain, C.B., and at Bedford Basin, Halifax County, an output of 48,000 bbls was made in 1889. 40 men and boys employed.

Manager at Quarries : D. Maclachlan, Marble Mountain, C.B., N.S.

BRISTOL IRON CO. (Ltd.)

Incorporated 1888. Capital Stock, \$100,000, fully subscribed and paid up.

Directors :

Charles Magee, Ottawa, *President*.
 Robert Blackburn, Ottawa, Ont. | Hiram Robinson, Hawkesbury, Ont.

Head Office : E. McMahon, *Secretary-Treasurer*, Russell House Block, Canal Street, Ottawa.

The property controlled by this Company consists of 400 acres of mineral land in Bristol Township, Pontiac County, in the Province of Quebec. Mining operations were first commenced by the former owners in 1872-3, and during the latter period some 4,000 tons of ore were mined; shipments were also made in 1884-5 to the amount of 4,000 tons. Active mining operations were begun by the present Com-

BRISTOL—Continued.

pany in November, 1889, from which date up to 1st July, 1890, some 10,000 tons of ore have been shipped, mainly to Chatasauqua, Penn. Seventy men and boys employed. The east slope has been carried down to a depth of 62 feet, and considerable ore removed. The centre slope is approximately 150 feet deep, and from this slope four drifts, two on each side, forming respectively the first and second levels, have been run. The first level starting at 30 feet from the surface, extends 20 feet south-east, and 50 feet north-west of the slope. On this latter drift a rise was made, and ore has been taken out of a chamber approximately 35 feet high, 50 feet long and 80 feet wide. The slope continues below the second level for about 60 feet, pitching at an angle of 60°. The machinery plant consists of a 14x20 steam engine, driving by friction brake one drum 6 feet in diameter by 6 feet wide, so set as to allow room for a second drum; the one-inch wire rope from this drum passes over appropriate head sheaves, and thence down the slope to the bottom of the mine. A small exploring hoisting engine is also in place for carrying ore from the bin at the head of the slope to the top of the roasters. Capacity of hoisting engine 300 tons per day. Two 25 horse-power portable boilers. Two Taylor-Langdon roasters, each 14 feet in diameter and 27 feet high, with seven ore compartments and eight drawing arches; also one Davis-Colby roaster 17 feet in diameter and 20 feet high. The four producers which are of the Taylor-Langdon pattern are thoroughly equipped and connected with the roasters. The estimated value of the plant and buildings, etc., is estimated to exceed \$75,000. A line of railway $4\frac{1}{4}$ miles, standard gauge, connects the mines with the Pontiac and Pacific Junction Railway.

The following is an analysis of the ore taken from the Report of Progress of the Geological Survey for 1873-74, page 208:—

Peroxide of iron.....	65'44	} Metallic iron, 58'37.
Protioxide of iron.....	14'50	
Bisulphide of iron.....	2'74	—Sulphur, 1'46.
Protioxide of manganese.....	0'11	
Alumina.....	0'60	
Lime.....	3'90	
Magnesia.....	0'45	
Silica.....	11'45	
Carbonic acid.....	1'64	
Phosphoric acid.....	traces	
Titanic acid.....	none	
Water.....	0'14	
	100'97	

The ore, though generally known as magnetite, contains a considerable proportion of hematite.

Mine Superintendent: C. C. Symonds, Billerica, P.O., Pontiac County, Que.

BRITISH COLUMBIA MILLING & MINING CO. (Ltd)

Incorporated 9th January, 1878. Authorized Capital, \$625,000, divided into 125,000 shares of a value of \$5 each.

Directors:

H. C. Beeton.	
F. S. Barnard,	D. W. Higgins,
David Kurtz,	G. A. Sargison,
John Robson,	John Kurtz.

Head Office: G. A. Sargison, Secretary, 48 Langley Street,
Victoria, B.C.

B. C. M. & M. CO.—Continued.

Formed to acquire, work, smelt and otherwise treat ores and minerals in the Province of British Columbia. The Company's property consists of 84 acres of mineral land situate in the Cariboo district. A 20-stamp mill and saw-mill are on the property. Not in operation in 1890.

BRITISH COLUMBIA POTTERY & TERRA COTTA CO. (Ltd.)

Incorporated October, 1890. Authorized capital \$60,000, divided into 1,000 shares of a value of \$60 each.

Directors :

S. C. Burris,	John Nicholles.	Fred G. Walker.
J. H. MacLaughlin.		Joseph Hunter.

Head Office, Victoria, B.C.

Formed to carry on a general earthenware manufacturing business in all its branches, including all kinds of Pottery, Brick, Drain Pipes and Terra Cotta Wares, etc.

BRITISH COLUMBIA SMELTING CO. (Ltd.)

Registered in London 9th May, 1888. Capital, £65,000, in shares of £1 each.

Directors :

Wm. Johnstone Steele, Chairman.	
Thos. Isaac Birkin,	Hon. F. G. Vernon,
Kenneth H. James,	Major John Wilson,
C. T. J. Vautin,	George De Wolff.

A. Y. Tullis, *Secretary*.

The last three are the Canadian Board of Management.

Head Office : 42 Old Broad Street, London, E. C.

The company was formed for the purpose of erecting smelting works and carrying on mining operations in British Columbia. It has acquired a three-fourth interest in the valuable lead mines named the "Monarch," "Cornucopia" and "Alpha," all situated at Field, B.C. About 4,000 feet of tunnels have been driven in at the "Monarch," and 2,000 tons of ore mined assaying 40 per cent. lead and \$5 in silver. Only assessment work has been done on the other claims. Thirty men employed. Smelter not in operation in 1890 owing to difficulty in obtaining suitable fluxing ores.

Mine Superintendent : H. H. McLaren. Field, B.C.

BRUCE LAND & MINING CO. (Ltd.)

Registered, 9th August, 1878. Nominal Capital £5,000 in shares of £1 each, of which 2,971 has been issued and £1,856.17.6, called up, being 12s. 6d. per share.

Directors :		
R. B. Lloyd,		C. S. Hill.
T. C. Reynolds.		E. J. St. John. P. N. Taylor.

Head Office : W. H. Rowse, Secretary, 6 Queen Street Place, London, E. C

Formed for the purpose of acquiring a freehold property known as the Bruce Location, in the Province of Ontario, and working mines, etc. Annual reports to 30th September, and meetings are held in December. The accounts to 30th September, 1887, showed a balance of expenditure over receipts of £2,173; and those to 30th September, 1888, £2,651 18s. 8d., an increase of £478 18s. 1d.

BRUNSWICK MANGANESE CO.

Incorporated 30th April, 1884. Capital, \$100,000.

Directors :		
Herbert H. D. Pierce, President.		
Geo. D. Hall, Jr.		W. R. Stockbridge.
J. A. Tilden.		John A. Loring.

Head Office : 34 Oliver Street, Boston.

The property controlled by this company contains in all about 1100 acres, located at St. Martins, St. John's County, in the Province of New Brunswick. 25 men employed. Machinery plant includes a 40 h. p. engine, 50 h. p. boiler, crusher, rolls, Lawder jigs, hoisting and other gear, of the estimated value of \$10,000. Daily output about 30 tons. Shipments to Pittsburg, U. S. A. The force was to be increased to 80 men, and more extensive workings were contemplated at 1st October, 1890.

Mine Superintendent : Homer A. Lyons, West Quaco, N. B.

BUCKINGHAM BRICK & TILE CO.

Incorporated 25th April, 1888. Authorized Capital, \$30,000. Divided into 300 shares of \$100 each.

Directors :		
Lionel H. Shirley.		
W. A. Wilford,		Alexander Bremner,
John H. Wood,		James Howley.

Head Office : Montreal, Que.

Formed to manufacture Bricks, Tiles, Drains, &c., and to dispose and sell the same and to acquire and hold real estate for the purposes of the said business.

CALEDONIA MINING CO.

Organized 1888, under the laws of the State of Virginia. Capital \$500,000 in shares of \$100 each, fully subscribed and paid up.

Directors :

Gilbert Parker, Philadelphia, Pa.,		
R. D. Evans, Boston, Mass.,	|	G. W. Lathrop, Rochester, N. Y.,
Colonel G. Turner, Wilmington, Del.,	|	Walter E. Rex, Philadelphia, Pa.

The Company holds 40 gold areas under lease from the Government of Nova Scotia. Lodes opened for 1,900 feet. Plant includes 10 stamp-mill, Ingersoll compressor, hoisting and pumping gear, etc. 100 men employed in 1890.

Mines and Works : Malaga, Queen's County, N.S.

CAMBRIAN COAL CO. (Ltd.)

Incorporated 5th April, 1886. Authorized Capital \$83,100, divided into 831 shares of a value of \$100 each.

Directors :

R. S. B. O'Brien,		
Edward Quennell,	|	Thomas D. Jones,

Head Office : T. D. Jones, Secretary-Treasurer, Nanaimo, B.C.

The property owned by this company contains 831 acres of mineral land, situate in the Cedar District, Vancouver Island, at a point about two miles from the property owned and operated by the New Vancouver Coal Mining and Land Company. The company's property being freehold is not subject to any Government royalty. A twelve month's agreement has been made by the company whereby the new Vancouver Coal Mining and Land Company may purchase the coal and other minerals contained on the 831 acres aforesaid, along with certain surface rights, etc. This bond expired on the 1st October, 1890.

CANADA GOLD CO.

Registered in London, 18th February, 1879. Authorized Capital £15,000, in shares of £1 each, all of which has been issued and paid up in full ; there are also 6 per cent. debentures to the amount of £4,000 stg.

Directors :

J. N. Gordon, Chairman.		
Edward Hunter,	|	James Sinclair,
W. P. Lockwood,	|	Henry W. Spratt.

Head Office : 67 Cornhill, London, E.C., England.

Formed for the purpose of mining for, raising, winning, getting and reducing gold, silver and other ores, minerals, etc., in the Dominion of Canada. Was not in active operation, 1890.

**CANADA NORTH-WEST COAL & LUMBER
SYNDICATE, (Ltd.)**

Registered in London, Eng., with a Capital of £70,000 stg., to acquire and work the Coal Creek and Bow River Mines at Canmore and at Mitford, in the Province of Alberta, N.W.T.

Directors :

Sir George Baden-Powell, K. C. M. G., M. P.	
Viscount Grimstone, M. P.,	The Earl of Norbury,
Emerson Bainbridge, M. E.,	Thos. B. H. Cochrane.

Canadian Offices : Geo. T. Bragg, Secretary. Canmore and Mitford, Alta

This company owns 1,280 acres of coal lands at Canmore, and 2,880 acres at Mitford, in the Province of Alberta. Extensive developments are being made at the company's mines at Canmore, a force of 75 men and boys being employed at 1st October, 1890. Main shaft 385' deep, tunnel 500', and still driving. Average thickness of seam 14'. A sample of the company's coal gave on analysis :—

Fixed carbon.....	86.80
Gas.....	7.96
Moisture.....	2.06
Ash.....	3.16
Sulphur.....	0.02

The output of coal at 1st October, 1890, averaged 100 tons per diem. The coal is largely used on the locomotives of the Canadian Pacific Railway.

General Manager: T. B. H. Cochrane. Mitford, Alta.

**CANADIAN PACIFIC PROSPECTING & MINING
CO. (Ltd.)**

Registered in London 31st May, 1889. Authorized capital, £10,000, divided into 9,900 Ordinary shares and 100 Founders' shares of £1 each. The whole of the Ordinary shares were offered for private subscription in June, 1889, and have been allotted and 5s. 8d. per share called up. The balance of the liability is payable in calls as required. The Founders' shares, which were all issued as fully paid, are not entitled to any share in the profits until a dividend of 25 per cent. has been paid on the Founders' shares in any year, after which the remaining profits are to be equally divided between the Ordinary and Founders' shares.

Directors :

Philip S. Dawson,	E. C. Rand,
John Harvey,	Capt. Frances Rettallack,

English Offices: Henry Ward, Secretary. 6 Queen St. Place, London, E.C.

Canadian Offices : Rand Bros., Vancouver, B.C.

Formed for the purpose of prospecting and mining for gold and other metals in the Cariboo district, British Columbia.

CANADIAN PHOSPHATE CO. (Ltd.)

Directors :

Edward Packard, junr., *Chairman.*
 W. H. Williams. | Thos. Oakeley. | W. G. Couper. | C. C. Hoyer Millar.

London Offices :

Messrs. Copper, Millar & Co., 155 Fenchurch Street, London, E.C.

CANADIAN OFFICES :

Messrs. Millar & Co., Atlantic Chambers, 209 Commissioner Street,
 Montreal, Que.

This company was registered on 12th December, 1887, to acquire and further develop the property of the Union Phosphate Mining and Land Company, of New York, consisting of the Star Hill, Williams and Ruby mines, 1,286 acres in extent, situated in the Township of Portland, Ottawa County, Que.

The authorised capital is £110,000, in shares of £1 each, of which 73,334 shares were offered for subscription in December, 1887. The letters of allotment were issued on 23rd December, 1887, the amount offered being subscribed, and the whole of the capital is now fully paid up. The purchase consideration was £80,000, payable £36,666 in fully paid shares and the balance in cash.

The exact quantity of ore produced during the 12 months ended November, 1889, was 6,560 tons of uncobbed ore, as compared with 4,036 produced during the 11 months ending 30th November, 1888, and the shipments to the United States, Canada and Europe during the same period amounted to 5,710 tons. Nearly 2,000 tons sold for shipment during 1889 had to be held over, owing to the scarcity of tonnage in Montreal caused by the London Dock strike.

The output and shipment of phosphate of all grades during the 12 months ended November, 1890, will probably exceed 7,000 tons. 150 men employed. An interim dividend of 6d. per share was paid in November, 1890.

CANADIAN SUPERPHOSPHATE CO.

Incorporated by Act of Parliament, assented to 16th April, 1889. Authorized Capital \$1,000,000.

Directors :

Hon. Matthew H. Cochrane, Compton, Que.
 William Abbott, Montreal. | Hon. C. C. Colby, Stanstead, Que.

Head Office: Montreal, Que.

Formed for the purpose of carrying on operations in mining and the development of mining property in the Provinces of Quebec and Ontario, and more especially the manufacture of sulphuric acid, the getting and preparing of Phosphate of Lime and other fertilizing minerals and the manufacture of Superphosphate of Lime and other fertilizers, etc.

CENTRAL RAWDON MINING CO. (Ltd.)

Incorporated 1890. Capital \$120,000, in shares of \$100 each, fully subscribed and paid.

Directors :

J. H. Smith, <i>President</i> , Windsor, N.S.	
Gould Northup, Rawdon, N.S.,	Wm. O'Brien, Windsor, N.S.,
Judson Dimock, Rawdon, N.S.,	C. H. Dimock, Windsor, N.S.,
J. R. Northup, Rawdon, N.S.,	J. C. Geldert, Windsor, N.S.

Head Office, J. C. Geldert, Secretary, Windsor, Hants Co., N.S.

The company holds and is operating from 150 to 200 gold areas under lease from the Government of Nova Scotia. The mines which are at Rawdon, are equipped with 15 stamp mill, hoisting and pumping gear and other machinery, and employ on an average about 30 men.

General Manager: Gould Northup, Central Rawdon, Hants Co., Nova Scotia.

COBOURG, BLAIRTON & MARMORA RAILWAY & MINING CO.

Incorporated 23rd June, 1887. Authorized Capital \$1,000,000, divided into 10,000 shares of a value of \$100 each.

Directors :

Thomas P. Pearce.	
James Crossen,	Joseph B. Pearce,
Joseph Henderson.	Frank S. Waters.

Head Office : T. P. Pearce, Belleville, Ont.

Formed to take over the property, real and personal and all the tools, revenues, rights, powers and privileges, formerly owned and operated by the Cobourg, Peterborough and Marmora Railway and Mining Company and purchased at public sale by Mr. T. P. Pearce, Belleville.

COLCHESTER COAL MINING CO. (Ltd.)

Incorporated 1890. Capital \$50,000 in 1,000 shares of \$50.00 each.
George Hyde, *President*, Truro. | J. W. Johnson, *Treasurer*, Truro.

Head Office : George Ross, Secretary, Truro, N.S.

Formed to acquire and work coal areas held under lease from the Provincial Government, particularly at North river, near Onslow, Colchester County. The sum of \$1,500 had been expended in the work of development up to the 1st January, 1890, when it was deemed advisable to suspend operations until July, when operations were again resumed with promising results. At this date about 100 feet of a slope had been completed, with gin for hoisting, double track and trolleys, etc., etc., a horse for miners erected, blacksmith's forge and the road repaired to the mine. In June, 1890, a third call of five dollars per share was made and it is probable that the balance of the stock will shortly be placed on the market to put up additional machinery for more extensive operations.

COLDSTREAM MINING CO.

Organized 1890. Authorized capital, \$1,000,000, divided into 40,000 shares.

Directors :

Gilbert Parker, President.

R. D. Evans,
C. A. Coffin,
Albert Stone,

J. S. Bartlett,
E. L. Sanborn,
R. R. McLeod.

Head Office : E. B. Eustin, Secretary, Sennerst St., Boston, Mass.

Formed to acquire and work the gold mining areas situate at, or near, Coldstream, in the County of Colchester, Province of Nova Scotia.

COLERAINE LUMBERING & MINING CO.

Incorporated 1885. Authorized Capital, \$60,000, divided into 600 shares of \$100 each.

Directors :

Hon. J. A. Chapleau,

Hon. Alex. Lacoste,
Louis A. Sénécal,
André N. Montpetit,

Alphonse Desjardins,
A. De. Martigny,
B. Globensky.

Jean M. Papineau.

Head Office : Coleraine, Que.

Formed to hold real estate for lumbering and mining purposes, and to manufacture timber and lumber, and to carry on the business of mining.

CONSUMERS' OIL CO.

Incorporated 1881. Capital Stock, \$30,000, divided into 300 shares of a value of \$100 each.

Directors :

H. W. Lancey, Petrolia, Ont.,

John Wolff, London, Ont.,

C. McCallum, London, Ont.

Head Office : F. Wolfe, Secretary, Petrolia, Ont.

The Company carries on the business of oil producers and refiners at Petrolia, Ont. Fifteen men employed. The individual stockholders being mainly producers, the Company owns and operates only a few wells, the principal business being almost entirely that of refining and manufacturing burning oils. The average yearly turnout is about 50,000 barrels.

Superintendent : M. Noble, Petrolia, Ont.

COTTONWOOD GOLD MINING CO. (Ltd.)

Registered in London, England, 8th June, 1889.

Authorised Capital, £10,000 Stg., in 1,000 shares of £10 each, divided into 625 A shares and 379 B shares, of which 575 A shares have been issued and the full amount paid up.

Directors :

W. J. Cutbill,
John Carruthers,

Douglas A. Stanley.

H. T. Cutbill,
Ulysses de Lungo,

Head Office : D. Amey, Secretary, 4 Old Jewry, London, E.C.

Formed for the purpose of purchasing from Douglas A. Stanley, his interest in certain mining claims in the West Kootenai Mining District, B.C. The mines owned and operated are known as the "Ella," "Golden King" and "Golden Wreath," and are located on the right bank of Cottonwood Smith Creek, which empties into the west arm of Kootenai Lake, a short distance below the town of Nelson. These claims contain an immense deposit of schistose slate, over 300 feet wide, which assays \$6.70 in gold to the ton. The surface is oxidized to a depth of several feet, and is free milling in character. The principal amount of gold in the rock is associated with sulphurets, which will require concentrating to a value of \$30 per ton to render profitable. The machinery erected on the ground to date, consists of two Huntingdon mills, with a capacity of 12½ tons, operated by 20 horse power engine. A 100 horse power stamp battery, with necessary concentrators, will be erected in 1890.

Mine Manager : Mr. Stanley, Nelson, West Kootenai Mining District, B.C.

CROWN POINT MINING CO.

Being organized at 1st October, 1890.

Promoters :

A. D. Cummings, Duluth, Minn.,	George Elder, Duluth, Minn.,
H. R. Tinkham, Duluth, Minn.,	James Billings do
E. Tinkham do	C. E. Shannon do
Hon. O. P. Stearnes do	W. N. Montgomery, Port Arthur.
Hon. J. D. Ensign do	

Head Office : A. D. Cummings, Secretary, Duluth, Minn.

This company controls 160 acres of mineral land in the District of Silver Mountain, situate at a point on the line of the P. A. D. & W. Railway, 40 miles distant from the Town of Port Arthur. The property was formerly owned by Messrs. A. D. Cummings and W. N. Montgomery, two of the promoters of the present company, and by whom it was formerly worked. The workings to date include : Adit-levels, 788', all on the vein ; winzes, 129' ; cross-cuts, 100'. The production to date amounts to 1,400 tons of silver milling ore of an assay value of 50 ozs. to the ton, and 28 tons of high grade smelting ore of an average value of 700 ozs per ton. Estimated value of plant \$2,000, to be largely increased when the present company is fully organized.

Mine Superintendent : W. N. Montgomery. Port Arthur, Ont.

CROW'S BAR MINING CO. (Ltd.)

Incorporated under the Companies' Act, 23rd June, 1890. Capital Stock, \$25,000, in 5,000 shares of \$5 each.

Directors :

D. L. Beckingsale, M.D., Vancouver, B.C.
 Sidney Herbert, M.D., Vancouver, B.C. | J. Van Volkenburgh, Vancouver, B.C.
 J. W. Horne, Vancouver, B.C. | C. C. Hanson, Vancouver, B.C.

Head Office : J. A. Anderson, Secretary, Turner Block, 310 Cordova Street, Vancouver, B.C.

Formed to work a claim of valuable gravel land situate on the eastern bank of the Upper Fraser, in the district of Lillooet, about 280 miles by rail and coach from the city of Vancouver, B.C. A lease of the ground for five years from the 4th day of March, 1890, has been granted by the Gold Commissioner of Clinton, to Messrs. Hanlon & Le Po, at an annual rental of \$50. In extent the land is about 480 acres, being from north to south about a mile and a half in length, and having an average width of half a mile from the summer high water mark of the Fraser River.

Gold has been found in paying quantities ; that is to say, the usual average receipt from a pan of dirt is from 5 to 7 cents in value. The benches are 30 feet in height from high water mark, and on these there are 3 feet of paying gravel below 2 feet of sand. Underneath, the benches are formed of clay mixed with gravel, with seams of paying dirt running through, which is supposed to pay largely for hydraulicing.

To extend operations, and so reap the full advantage, it is requisite to have a constant and copious supply of water, which must be brought from the hills at a distance of about 11 miles. A ditch of about 3½ miles in length has been already constructed. The remainder will be proceeded with, until completion, when the company is fully organized and the requisite funds are available.

Superintendent : Nicholas Hanlon, Crow's Bar, Clinton, B.C.

DANVILLE SLATE CO.

Incorporated 22nd July, 1886. Authorized Capital \$50,000, divided into 500 shares of \$100 each.

Directors :

Robert Miller,
 Alexander MacLeay, | J. S. Riddle,
 A. J. Morrill, | H. R. Williams,
 Chester C. Cleveland, | Jas. A. Gibson.

Head Office : Danville, Que.

Formed to open and work slate quarries and manufacture, export and sell the products thereof and any other business or trade necessary or auxiliary thereto.

DOMINION LIME CO.

Incorporated 1889. Authorized Capital \$400,000, in shares of a value of \$100 each, the whole of which has been subscribed and fully paid.

Directors :

Hon. Frank Jones, Portsmouth, N. H., President.	
Hon. J. G. Robertson, Sherbrooke, Que.,	R. H. Pope, M.P., Cookshire, Que.,
W. B. Ives, M. P., Sherbrooke, Que.,	Chas. A. Sinclair, Boston, Mass.,
F. P. Buck, Sherbrooke, Que.,	J. P. Cook, Salem, Mass.,
T. J. Tuck, Sherbrooke, Que.,	Geo. Van Dyke, Lancaster, N. H.

Head Office : J. R. Woodward, Secretary, Sherbrooke, Que. F. P. Buck, Managing Director and Treasurer.

This Company owns some 2,000 acres of land in the Township of Dudswell, in the Eastern Townships of the Province of Quebec, and carries on the business of producers of lime, lumber, etc. The Company's quarries are situate at Dudswell Station, on the line of the Quebec Central Railway, and yield an annual production of 36,000 tons of lime per annum. The limestone is obtained from large ledges of a dark or grayish rock, in places crystalline, which, in the upper quarry, presents a nearly vertical face of 90 feet. This is situate in close proximity to the kilns, of which there are ten in all, six in the upper, or older, works and four in the lower and newer works, about half a mile distant. Each of these kilns is stated to have a daily capacity of 300 barrels of lime. The lime manufactured is remarkable for its purity, the foreign matter in the rock averaging not more than one to two per cent. The Company also turns out yearly some 2,000,000 feet of lumber and 40,000 barrels from its cooorage. Estimated value of machinery, plant and buildings, \$300,000. One hundred and twenty-five men and boys employed.

Superintendents : J. H. Barker and O. C. Bickford, Dudswell, Que.

DOMINION MINERAL CO.

Incorporated 16th April, 1889. Authorized Capital \$100,000. By a supplementary Act assented to 24th April, 1890, the capital stock may be increased by the board of directors from time to time, to the sum in all of \$500,000, in shares of \$100 each, provided that the authorization and consent of all the shareholders of the company are previously obtained, either by their unanimous vote at a special general meeting duly called and held for that purpose, or by an instrument in writing to that effect executed by all the shareholders.

Directors :

John M. McIntyre, Montreal, <i>President</i> .	
James Worthington, Toronto,	D. L. Lockerby, Montreal,
Wm. C. McIntyre, Montreal.	Edmund Reynolds, London.

Head Office : Henry Cutt, Secretary, 157 St. James Street, Montreal.

This company owns and operates certain mineral lands in the Townships of Blezard, Drury and Dennison, in the mining district of Algoma, in the Province of Ontario. Mining operations for copper and nickel were begun in the fall of 1889, and at 1st November, 1890, a force of 250 men were employed. Estimated value of machinery plant \$50,000.

Resident Manager : John Ferguson, Sudbury, Ont. George Attwood, M. E., Consulting Engineer.

DOMINION PHOSPHATE CO. (Ltd.)

Registered in London, 1889. Capital £40,000, in shares of £5 each.

Directors :

S. Annan Bryce. | S. Richardson. | C. M. Pielsticker.

Head Office : Room 186, Suffolk House, Cannon Street, London, E.C., Eng.

Formed to acquire and work phosphate and other mineral lands in the Dominion of Canada. The company purchased from Mr. Angus McMillan certain properties at Little Rapids, in the Township of Portland East, Ottawa County, in the Province of Quebec, the purchase consideration for which is stated to have been \$15,000 cash. The mines have been equipped with Ingersoll Compressor, Steam Drills, Hoisting Gear and suitable accommodation for a large force of miners. Average men employed 60.

Superintendent : C. Gibbs, Little Rapids, via Buckingham, Que.

DONALD GOLD MINING CO. (Ltd.)

Incorporated 13th May, 1889. Authorized Capital, \$10,000, divided into 10,000 shares of \$1 each.

Directors :

John Houston,	James Cullen,	James Wright,
Alex. McDonald,		William Elliott.

Head Office : Donald, B.C.

Formed to purchase lease or otherwise acquire mining ground in the Kootenai district, British Columbia ; also, to conduct a general trading business in connection with that of mining.

DOUGLAS COAL MINING CO. (Ltd.)

Incorporated 1885. Authorised Capital, \$50,000, divided into 10,000 shares of a value of \$5 each.

Directors :

Ephraim White, Nine-Mile River, N.S.,		Hugh McLearn, Maitland, N.S.,
Jas. Lynch, Shubenacadia, N.S.,		H. T. Harding, Maitland, N. S.
Evan Thompson, Halifax, N.S.,		

Head Office : Maitland, Hants County, N.S.

Formed to search for, work, mine and sell coal within the County of Hants, in the Province of Nova Scotia. The company was not in active operation during the year 1889.

DOUGLAS MINING CO.

Incorporated 1st May, 1888. Authorized Capital, \$100,000, divided into 100,000 shares of a value of \$1.00 each.

Directors :

George H. Vilas.		
O. T. Waring, Jos. Bushnell, J. E. Turrell, O. W. Joslyn,	Patrick S. Trainor, Edwin Hawley, M. A. Robinson, Jas. W. Musson,	Silas H. Paine, Geo. B. Wilson, R. T. Davies, John Douglas.

Head Office : Rock Creek, Osoyoos Division, Yale District, B.C.

Formed to acquire and work ores and minerals in the Province of British Columbia. Seven men employed.

DUFFERIN GOLD MINING CO.

Reorganized and Incorporated, 1890. Authorized Capital Stock, \$500,000, divided into shares of a value of \$25 each, the whole of which has been fully subscribed and paid up.

Directors :

Gardner Clish, Truro, N.S.	
A. Kent-Archibald, Truro, N.S. Silus Tupper, Truro, N.S.	John McNab, Halifax, N.S. Timothy Archibald, Truro, N.S.

Head Office : Truro, N. S.

Formed to mine and smelt ores in the Province of Nova Scotia. The company holds under lease from the Provincial Government, and otherwise controls, some 343 gold areas at Salmon River, in the County of Halifax. Sixty persons employed. 38-stamp mill. A new mill of 20 stamps, operated by water power, and capable of turning out 60 tons per day, is in course of erection.

Mines well equipped with all necessary machinery, including ore-breakers, hoisting and pumping gear, etc. The buildings consist of 14 miners' dwelling houses, saw-mill, blacksmiths' and carpenters' shops, etc., etc. Openings from E. to W., 1,700 to 2,000 ft. ; depth of shafts from 100 to 275 ft. Vein varies from 6 in. to 25 ft. in width. Some of the richest quartz was struck at a depth of 60 ft. in No. 3 shaft, and continuing to a depth of another 100 ft., and still working. In some places this vein extends to 20 feet in width on the rolls. Pending the reorganization of the company in 1890, the property was not worked so extensively in 1889 as in former years. The official returns show that during that period the yield of gold was 2,032 ounces from 7,633 tons of quartz crushed. The total yield of gold up to 31st Dec., 1889, has been 33,200 ounces from 73,041 tons of rock crushed.

Managing Director : A. Kent Archibald, Salmon River, Halifax Co., N.S.

EASTERN DEVELOPMENT CO. (Ltd.)

Organized 1885 by Act of the Legislature of Nova Scotia, passed in 1882, and further amended in 1884. Authorized capital stock \$2,000,000, divided into 200,000 shares of a par value of \$10 each, and an issue of \$500,000 of 7 per cent.

EASTERN D. CO.—Continued.

mortgage bonds, in denominations of \$1,000 each. Bonds are held at par value and accrued interest, and carry a bonus of stock which is likely at any time to be reduced or stopped altogether. The American Loan and Trust Company, of Boston, are trustees for the bond-holders, interest payable at the office of the Trust Company semi-annually, in May and November. Stockholders have power, under the charter, to increase the stock capitalization, from time to time, up to 500,000 shares or \$5,000,000, which will leave ample margin to meet the natural growth of the enterprise.

Head Office : Thomas Mair, Secretary, 95 Milk street, Boston, Mass.

The Company holds certain copper areas under lease from the Provincial Government, and is the owner of the Coxheath Copper Mines, on the Island of Cape Breton, and situate at a point about ten miles from the Towns of Sydney and North Sydney, and five miles from the north-west arm of Sydney Harbor. The mines being located so near to the extensive coal fields of Cape Breton, with limestone and iron ores for fluxes in abundance, are extremely favorably situated for copper smelting operations on an extensive scale. Up to 1st October, 1890, the sum of \$250,000 had been expended in mining, machinery and plant.

The surface work of tracing the veins has located them for over 3,500 feet in the centre of the mining rights owned by the Company, and which cover the strike of the formation for nearly three miles. The general strike of the veins is about 56° east of north, and the dip from 60° to 64° north. The main shaft is down 250 feet, and at the 184 foot level a cross-cut over 600 feet long cuts through several parallel veins, of which two (B and C) are paying veins at that depth, and have been drifted upon sufficiently for stopping operations and a regular ore production. Vein B, for most of the distance it has been opened, will average 10 feet in width, the ore as it lies in the vein averaging 10 per cent. copper, and a good deal of it will assay from 10 to 20 per cent. copper. Vein C varies from 3 to 8 feet in width, ore averaging at least 5 per cent. copper. The other veins in these workings are not so rich at present depth, but are strong promising formations, and will undoubtedly concentrate with the other veins with depth. Several other very rich parallel veins have been explored on the surface, the most southerly one being 1,500 feet distant from the main shaft. The Company has arranged with Messrs. Richardson & Co., of Swansea, Wales, to act as their agents in England, and the product of the mines will be smelted into matte, and largely shipped to that market. It is also intended to erect coke works, and exchange coke for ores with the copper mines of Venezuela and Newfoundland. First quality of coke will not cost over \$1.50 per ton to manufacture. With the dock at the smelters on the deep water of Sydney Harbor, direct water freights to market will be enjoyed for eight months of the year, and the railroad now being completed through the island by the Dominion Government will connect with the works and the coal district, thereby enabling the Company during the winter months to receive its fuel direct, and to ship its product over only ninety miles of rail to the open harbor of the Straits of Canso; so that practically all the year round it will have direct and cheap water freights to market. It is also proposed to erect copper smelting works on Sydney Harbor of two hundred tons capacity per day. The Company estimates that in less than five years from starting up its works it will be smelting, at a handsome profit, not less than 1,000 tons of an average 7 per cent. ore per day, yielding a product, after allowing for the loss in smelting, equal to 17,000 tons of pure copper per annum, and at an extremely low cost.

The surface plant includes five Rand duplex drills and compressor hoisting engine, having two cylinders 8x8 inches and a five foot drum. There is also an ample supply of pump power, but at present eight hours discharge through a 2½ inch column keeps the mine dry. Steam is supplied by three portable boilers, aggregating one hundred and twenty-five horse power. An engine with 10x20 inch cylinder drives the sawmill, lathe, crusher, and screens. There are all necessary shops, magazines and boarding houses for one hundred and fifty men, an ore dressing house, sixty square is built and arrangements are being made to add another compressor, seven drills, and a fifty horse power boiler to the present plant. Owing to

EASTERN D. CO.—Continued.

the failure of the French Syndicate, mining operations during the year 1889, were confined to purely development work. At the 31st December, 1889, the stock pile included 2,000 tons of dressed ore. A sample lot of low grade ores, consisting of three tons, 2.25 per cent. ore, and three tons of 3.46 per cent of ore were sent to Germany. No difficulties were experienced in their treatment, the 2.25 per cent. lot furnishing concentrates assaying an average of $9\frac{1}{2}$ per cent. copper, and the 3.46 lot concentrates of 12.60 per cent.

In addition to the copper properties, the company owns the coal rights over fifteen square miles of territory, located near the Straits of Canso, at Little river, in which three veins of coal are known to exist, and a shaft is down two hundred feet in a five foot vein of good coal, with boring machinery in position for further exploration. The new Government railroad is within two thousand feet of this shaft. The company also owns seven hundred acres of land in fee, in the centre of the territory, through which the railroad runs. While the company does not at present intend to operate its coal mines, they are quite likely to prove valuable assets in the near future.

The County of Cape Breton has released the company from taxation on all real and personal property for a period of 25 years. 39 persons were employed during the year 1889, but it is purposed to increase the working force to 100.

General Manager: Isaac P. Gragg, Coxheath, Cape Breton.

EAST RIVER COAL CO.**Owners:**

John Muir & Sons, New Glasgow, N.S.

This Company is working under a sub-lease from B. G. Gray, Halifax, on an area of some two square miles, at a point on the East River about three miles from New Glasgow, in the County of Pictou, Nova Scotia. The total quantity of coal raised during the year ended 31st December, 1889, amounted to 1,545 tons. A small force employed.

EAST RIVER GOLD MINING CO.

Incorporated 1889. Authorized Capital, \$2,700, in 27 shares of \$100 each.

Directors:

W. A. Maling, Halifax, N.S.,	W. H. Tees, Halifax,
C. W. Outhit, Halifax,	Geo. B. Maling, Halifax.
Edwin Hubley, Halifax,	

Head Office: Halifax, N.S.

EAST TEMPLETON DISTRICT PHOSPHATE MINING SYNDICATE, Ltd.

Registered 29th November, 1889. Authorized capital, £6,000 stg., in shares of £1 each. Number of shares taken, £5,347. Amount of calls received, £5,340. Number of shareholders at last returns, 77.

Directors:

James Boyd.	G. C. Lomer.
Andrew Hunter.	

EAST TEMPLETON D. P. M. SYND.—Continue I.

Head Office : C. M. Anderson, Secretary. 4 Fenchurch Ave., London, E. C.

CANADIAN OFFICE :

Messrs. Lomer, Rohr & Co., Custom House Chambers, Custom House Square, Montreal, Que.

Formed to acquire, work and further develop certain phosphate properties, including the north half of Lot 7, and Lots 8, 9, 10 and 11 in the Eleventh Range of Templeton, in the County of Ottawa, Province of Quebec, in all about 900 acres in extent.

Mining operations were first begun by Messrs. MacLaurin and Blackburn in the year 1878, when it was worked with a small force and paid well, yielding an average yearly output of 2,000 tons, fully half of which was of high test, averaging fully 80 per cent. In 1887, McLaurin sold out his interest to Mr. Robert Blackburn, who continued to work it at a profit up to November, 1889, when it passed into the hands of the present company. 100 men are employed. The output for 1890 is estimated to be fully up to 3,000 tons.

EXCELSIOR COPPER CO., Ltd.

Registered 26th September, 1888.

Authorised Capital. £450,000, in shares of £1 each, of which £150,000 was offered for subscription in October, 1888, but only about 15,000 shares were subscribed.

Directors :

Col. G. B. Malleon, C.S.I.,
Sir Howard, Elphinston, Bart.,
G. P. Appleyard,

Hon. H. Mercier,
Hon. W. W. Lynch,
J. N. Greenshields, Q. C.

Offices: 2 Copthall Buildings, London, E. C.

1728 Notre Dame Street, Montreal, Que.

Formed to acquire the Excelsior Copper mines, West Broughton, Que. The property consists of 4,100 acres of mineral land, comprising 2,800 acres freehold, and 1,300 acres of mining rights. According to reports presented at the last annual meeting held on 22nd April, 1890, the Company had raised in 1889, 20,000 tons of schist ore, and from thirteen assays made the lowest yield was 3.90 per cent. and the highest 9 per cent. For the purpose of enabling the directors to further develop the property, a resolution was adopted at this meeting authorizing the directors to raise the sum of £20,000 by the issue of debentures secured on the property and plant bearing interest at 7 per cent. per annum, payable half yearly.

The following are the present depths of the various workings at the mines: Fanny Eliza, shaft, 1,053 feet; American, 240 feet; Sayles, 240 feet; Whitburn, 230 feet; Kent, 168, feet; No. 2, 138 feet; Douglas, 86 feet; No. 1, 82 feet; Harvey Hill, 70 feet; Fremont, 60 feet; Poulin, 32 feet; McGee or Hill, 23 feet; Centre, 22 feet. Adit extended into hill 1,400 feet. Average number of men and boys employed, 125; capacity of smelter, 25 tons per day of 24 hours; mines well equipped with necessary pumping and winding engines at four shafts; stone-breaker, blower, etc., for furnace, and other gear.

General Manager : Thomas R. Davey, West Broughton, Que.

FORREST ROSE & ST. GEORGE HYDRAULIC GOLD MINING CO.

A private company, organized in 1876, and composed of the following shareholders :

James Innes,
W. P. Smith, | William Manson.

The company holds 114 acres of land in fee simple, and has for a number of years successfully worked alluvial ground at William's Creek, in the Cariboo district, British Columbia. Eight men employed in 1890. \$25,000 expended to date in opening up the claims. James Innes, Barkerville, B.C., Superintendent.

FOXTON PHOSPHATE MINING CO., Ltd.

Registered 19th April, 1889. Authorized capital, £12,000, in shares of £1, all of which have been issued and paid up.

Directors :

C. E. H. Moller, Chairman.
A. Hunter. | Wm. Adams. | G. C. Lomer.

Head Office : C. M. Anderson, Secretary, 4 Fenchurch Ave., London E. C., England.

CANADIAN OFFICES :

Messrs. Lomer, Rohr & Co., Custom House Square, Montreal, Que.

Formed to acquire, work, and further develop phosphate lands in Canada. The company acquired, in 1889, the property formerly owned and operated by James Foxton, Sydenham, containing 200 acres, in the Township of Sydenham, Province of Ontario. Sixty men employed. A dividend equal to 20%, per annum, was paid in Dec., 1889, for the six months ending 31st October in that year. Estimated value of plant, \$10,000.

F. M. German, Superintendent.

FRASER RIVER GOLD GRAVELS SYNDICATE.

Registered in London 20th March, 1889. Authorized Capital, £7,000, divided into 30 Founders' shares and 6,970 Ordinary shares of £1 each.

Directors :

J. H. Collins, F.G.S., | James Wilson,
T. A. Shepherd, | T. J. Lawrence.
T. Higgins.

Head Office : A. E. Lock, Secretary, 165 Fenchurch Street, London, E. C.

Formed to execute and carry into effect an agreement made between J. H. Collins, T. J. Lawrence, T. A. Shepherd and Jas. Wilson, with the object of acquiring certain mining rights on the Fraser River, B.C. ; to acquire lands and mining rights in British Columbia, and to carry on the business of winning and working gold, gold quartz and other metals and minerals, and preparing same for the market, and generally to carry on the business of metallurgists, metal dealers, assayers and refiners. The property owned consists altogether of some 600 acres, at or near the Town of Yale. In 1889 a small force was employed.

Mine Superintendent : Wm. Teague, Yale, B.C.

FRONTENAC PHOSPHATE CO. (Ltd.)

Registered 25th June, 1890. Capital Stock, £10,000, in shares of £1 each.

W. Bailey Marshall, Chairman.

A. Charles, Secretary, 1 Fenchurch Avenue, London, E. C.

Canadian Office: C. J. R. Stirling, Managing Director, 42 Emily Street, Kingston, Ont.

Formed to acquire phosphate and other lands and mines in Canada and elsewhere, and to adopt an unregistered agreement with the Stirling Phosphate and Mining Company of Kingston (Limited) and with C. J. R. Stirling. In August, 1890, mining operations were commenced on the south half of Lot 31, in the 1st Concession of Bedford, a force of from 15 to 20 men being employed. At that date the plant consisted of an engine and boiler, two Ingersoll drills, steam hoisting and pumping gear.

GALWAY MINING CO. (Ltd.)

Incorporated 1868. Authorized Capital Stock, \$20,000, of which to date \$13,000 has been subscribed and paid up.

Directors:

H. C. Rogers, Peterborough, Ont.	
H. Calcutt, Peterborough, Ont.	A. N. Campbell, Toronto.
J. Stephenson, " "	C. J. Bloomfield, Lakefield,
R. A. Morrow, Peterborough.	

Head Office: Peterborough, Ont.

Formed to acquire and work a property consisting of the west half of Lot 20, Concession A, in the Township of Galway, in the County of Peterborough, Ont., 50 acres. A shaft 10 ft. by 6 ft. has been carried down and timbered to depth of 110 ft., and other developments made, but owing to insufficient capital and the dullness of the lead market at the time, the mine was shut down, and no work has been done for several years.

GENERAL MINING ASSOCIATION (Ltd.) OF LONDON, ENG.

Registered 1825. The capital was £274,690 in fully paid shares of £10, but in 1874 a return of £1 per share was made, and in 1880 a further £1 per share was repaid. There is now, therefore, a capital of £219,752 in shares of £8.

Directors:

J. D. Hill, Chairman.	
C. Bischoff,	W. S. Cunard,
F. W. Bigge,	Col. W. C. Western.

Head Office: E. C. Bigge, Secretary, Bloomfield House, London Wall, London, E.C., England.

GEN'L M'NG ASS'N—Continued.

This company owns and operates the Sydney mines on the Island of Cape Breton, in the Province of Nova Scotia. From 1785 to 1827 they were worked in a very irregular manner, sometimes by the Government, and at others by various individuals and companies. According to Mr. R. H. Brown, the present manager, the production during this period was only 275,000 tons, or less than one-half what should have been produced from the area worked. On 1st January, 1827, the mines passed into the hands of the present company, who hold under lease in the district more than 30,000 acres, underlaid for the most part by valuable seams of coal. The following is an analysis of a specimen of the coal by Prof. How, of Windsor, N.S. :—

Hygroscopic water.....	3'04
Volatile combustible matter.....	31'14
Fixed carbon.....	61'50
Ash (reddish-brown).....	4'32

In 1889 there were 517 persons employed above and below ground, and the total output of coal is officially reported to have amounted to 144,966 tons. The coal sales for the same period were as follows :—

	Tons.
To Nova Scotia.....	21,459
“ New Brunswick.....	5,913
“ Prince Edward Island.....	999
“ Quebec.....	59,852
“ Newfoundland.....	24,450
“ United States.....	1,021
“ Bunker steamers.....	11,198
“ Colliery employés.....	3,416

Total sales 1889..... 128,308 tons.

Seams 5 ft. 3 in. thick, dipping at an angle of 15°, and worked by shaft 680 ft. deep. Accounts to December 31st submitted in April, but an interim meeting is held in November. A dividend of 2s. 6d per share was paid in 1877; for 1878, 4s.; for 1879, 2s. 6d.; for 1880, 4s. 6d.; for 1881 and '82, 8s.; for 1883 a dividend of 10s. per share was paid, with a bonus of 5s. per share out of the profits derived from the sale of shares in a subsidiary company; in 1884, 5 per cent.; for 1885 and 1886, 3½ per cent. each year; for 1887, £4 13s. 9d. per cent.; 1888 and 1889, 3¼ per cent. Reserve Fund, £29,850 stg.

General Manager: R. H. Brown, Sydney Mines, Cape Breton, N.S.

Underground Manager: R. Robertson. | *Engineer*: John Elliot.

GEORGE HEENAN MINING CO.

Incorporated 18th April, 1883. Authorized Capital, \$500,000, divided into 250,000 shares of \$2 each.

Directors :

Jas. R. Jones,		Geo. Harvey,
Jas. W. Good,		Geo. Heenan.

Head Office : Winnipeg, Man.

Formed to carry on the business of quartz mining and milling, and to acquire, hold and sell mining property in the County of Varennes, Province of Manitoba.

G. H. NICHOLS & CO.

A private enterprise controlled solely by—

Mr. G. H. Nichols, New York.

Mr. W. H. Nichols, New York.

Head Office : 68 William Street, New York.

OFFICIALS.

Earle C. Bacon, Engineer-in-charge, New York.

S. L. Spafford, General Manager, Capelton, Que.

Richard Penhale, Supt. Albert Mines, Capelton, Que.

A. W. Elkins, Supt. Chemical Works, Capelton, Que.

H. Wigglesworth, Manager, Fertilizer Dept., Capelton, Que.

The property owned by this company covers some 640 acres of land, and consists of the Albert Copper Pyrites mines and the Capelton Chemical and Fertilizer Works, all situated at Capelton, in the Eastern Townships of the Province of Quebec. The total production from the mines for the year ended 31st December amounted to 36,000 tons. Walter shaft, 500 ft. deep; Willie shaft, 300 ft.; total workings, 1,400 ft. An average number of 180 persons employed at mines. At the chemical and fertilizing works 110 persons employed. The bulk of the ore mined is utilized by the company for the manufacture of sulphuric acid. Superphosphates and other agricultural fertilizers are manufactured at the fertilizer works. The company's operations were first begun in March, 1881. Equipped with first-class plant.

Mines and Works,

Capelton, Que.

GLACE BAY MINING CO. (Ltd.)

Incorporated 12th July, 1862. Authorized Capital \$640,000, divided into 6,400 shares of a value of \$100 each.

Directors :

Edward P. Archibald, President.

James R. Lithgow,

Peter Lynch,

W. Paulin,

F. Archibald.

Head Office : James R. Lithgow, Secy.-Treas. Halifax, N.S.

This company owns an area of four square miles of coal lands, and operates the Little Glace Bay Colliery, at Little Glace Bay, on the Island of Cape Breton, Nova Scotia. The area is located about sixteen miles from Sydney, and is most favourably situated for shipping purposes, an artificial harbour, capable of affording safe accommodation to vessels of from 15,000 to 20,000 tons tonnage, having been constructed at an outlay of some \$150,000, and can be very much enlarged at a small outlay. There is now some 200,000 tons of coal shipped annually from this harbour, the Caledonia Coal and Railway Company also using it for their shipments, paying a tonnage toll on the quantity shipped. Steamers of 3,000 tons capacity load here, on a draught of 19 feet, and the harbour can be deepened to 20 feet or more. This harbour has been open since 1863, and though the shipments have been large, there has not been a single wreck in all that time, or in fact a serious accident to the shipping frequenting it. The area owned by the company embraces the entire land outcrop of the "Hub," or top seam, and a large proportion of that of the harbour seam (worked continuously since 1863), and is also underlaid at a depth of not more than 700 feet below the last mentioned seam, by three workable seams, and at a lower depth by two others, the thickness of which has not yet been determined.

GLACE BAY MINING CO.—Continued.

The average thickness of the Hub seam is 9 feet, of which the upper portion, one foot eight inches thick, being of inferior quality, is not taken out except in the main level. The Harbor seam, which is the representative of the Sydney main seam, is six feet thick. The Phelan seam averages 8 feet. The coal from these seams is largely used for gas purposes in Halifax and in the United States, and yields nearly 10,000 cubic feet of 15 candle gas per ton. An analysis of a specimen from the Harbor seam gives:—

Volatile matter	30'21
Fixed carbon	67'78
Ash	2'01

The total output of coal for the year ended 31st December, 1889, amounted to 73,919 tons. The coal sales during the same period were as follows:—

	Tons.
Nova Scotia and Cape Breton	15,750
Prince Edward Island	1,626
New Brunswick	2,173
Newfoundland	3,133
Quebec	47,579
West Indies	3,658
United States	None.
Bunker steamers	Only for Quebec.

Total 73,919

Harbor seam shaft (at 1st October, 1890), 250 feet deep; Hub seam shaft, 140 feet deep. Average men and boys employed, 280.

Superintendent and Agent: C. H. Rigby, Little Glace Bay, Cape Breton, N.S.

GOLD MINING ASSOCIATION OF CANADA (Ltd.)

Now being wound up. Official Liquidator: C. J. Singleton, 8 Staple's Inn, Holborn, London, England.

GOLD MINING ASS'N OF NOVA SCOTIA (Ltd.)

Incorporated 17th April, 1889.

Officers:

George W. Stuart, Truro, N. S., President:
 I. M. Reid, Musquodoboit Harbor, N. S., Vice-President. | H. M. Wylde, Secretary, Halifax.

PRESS COMMITTEE:

John E. Hardman, Oldham, N. S.
 H. T. Harding, Truro, N. S., | J. C. Pattner, Malaga, N. S.

LAW COMMITTEE:

F. B. Wade, Q. C., Bridgewater, N. S.,
 B. C. Wilson, Waverly, N. S., | H. T. Harding, Truro.

Head Office: Halifax, N. S.

Formed to mutually benefit and protect its members by facilitating the interchange of knowledge and ideas, and by taking concerted action upon all matters affecting or relating to the industry of gold mining in the Province of Nova Scotia, and generally to promote said industry by all lawful and honorable means.

GOWRIE COAL MINING CO.

Nominal Capital Stock \$400,000. A private company, consisting of the following :

Owners :

Blowers Archibald, W. H. Archibald,	Hon. T. D. Archibald, | William Purves, Charles Archibald.	
--	---	--

Head Office: North Sidney, Cape Breton.

The company holds an area of two square miles of coal lands, and is the owner of the Gowrie Colliery, situated on the north side of Cow Bay, on the Island of Cape Breton. The coal has an excellent reputation, both for domestic and steam purposes, and though it has a considerable proportion of ash, it is not apt to form clinkers. It has been extensively used in the manufacture of gas, though the large proportion of sulphur is objectionable. During the year ended 31st December, 1889, the total quantity of coal produced amounted to 111,700 tons. The number of persons employed above and below ground during the same period included 236 men and 63 boys, or a total of 299 persons.

Exported to	Tons Coarse.	Tons Fine.
To Nova Scotia.....	26,688	8,750
To New Brunswick.....	3,191	.....
To Prince Edward Island.....	1,263	1,552
To Quebec.....	40,691	4,534
To Newfoundland.....	9,588	.....
To United States.....	.....	2,313
To West Indies.....	1,875	.....
To Colliery Employes.....	4,000	.....
To Colliery Engines.....	5,000	.....
Tons	92,296	17,149

Manager and Agent : Charles Archibald, Cow Bay, C.B.

GRAND RIVER PLASTER CO.

Authorized Capital Stock \$50,000, divided into shares of a value of \$100 each, the whole of which have been subscribed and fully paid.

Directors :

Geo. S. Coutant, Dr. Abram Coles,	Warren Ackerman, | Ernest R. Ackerman, Wm. Hamilton Merritt.	
--------------------------------------	---	--

Edward W. Dodd, Secretary, 67 William Street, New York.

Head Office: Cayuga, Haldimand Co., Ont.

This Company controls 300 acres of land known as the Huff Tract, and 116 acres known as the Jones Tract, at North Cayuga, in the County of Haldimand, Ontario, upon which are situated the Merritt and Glenny Gypsum Quarries. The former has been worked for a period of forty-five years, and the latter for some twelve years. The Company also manufactures calcined plaster, white and grey land plasters, etc. Average yearly output 1,500 tons. Twelve men employed.

HALIFAX MINING AND PROSPECTING CO.

Incorporated 15th September, 1890. Authorized Capital, \$250,000, divided into 250,000 shares of a value of one dollar each.

Directors :

Charles Annand, Halifax, N.S.
George E. Forsyth, Halifax, N.S. | B. F. Pearson, Halifax.

Head Office : Halifax.

HANTS MINERAL OIL AND MINING CO. (Ltd.)

Incorporated 17th April, 1889. Capital Stock, \$5,000, divided into 500 shares of \$10 each.

Directors :

Henry Youle Hind, Windsor, N.S.
B. F. Pearson, Halifax. | Allan Haley, Windsor, N.S.

Head Office : Windsor, Nova Scotia.

This company is not at present working ; it is not known to own or hold any mineral areas, and does not possess any machinery plant.

HERON BAY MINING CO.

Incorporated 19th July, 1888. Nominal Capital Stock, \$200,000, in shares of \$10 each.

Directors :

Nicol Kingsmill, Toronto, Ont. | F. T. Sibley, Detroit, Mich.
A. H. Macdonald, Guelph, Ont. | Donald Guthrie, Guelph, Ont.

Head Office : Nicol Kingsmill, Secretary, 17 Wellington Street West, Toronto, Ont.

Formed to acquire and work mineral lands in the Province of Ontario, particularly Mining Locations IC, IIC, IIIC, Heron Bay, and Lot 12, Pic River, in the district of Algoma. Not in operation in 1890.

HEYWOOD HYDRAULIC GOLD MINING CO.

Veith Borland. | Thomas Heywood.

Head Office : Alex. Campbell, Superintendent, Keithley Creek, Cariboo, B.C.

A private company operating alluvial ground at Keithley Creek, in the district of Cariboo, Province of British Columbia. Five men employed.

H. H. VIVIAN & CO. (Ltd.)

Incorporated in Canada 16th May, 1890. The total subscribed capital of the company (which is also extensively engaged in mining and smelting in Great Britain and other portions of the world) is £328,000, in shares of £10 each, of which \$290,250 is called up, 18,800 6 per cent. cumulative preference (A) shares having £8 called, and 14,000 deferred (B) shares (allotted to the vendors) being fully paid. The sum of £16,632 has also been received in advance of calls, and ranks for 5 per cent. interest, and £14,579 has been borrowed. The deferred shares rank equally with the preference shares (after both have received 6 per cent.) up to 10 per cent., any further profits to be carried to a reserve fund. For the years 1882-3 2 per cent. was paid on the B shares; for 1883-4 only the full preference dividend was paid. On account of 1884-5 a dividend of 3 per cent. was paid on the A shares, but at the close of that year no further distribution was made, an available sum of £5,037 being carried forward; in 1885-6 this credit was extinguished, and a debit of £1,174 was carried over, and in 1886-7 the debit was increased to £2,411. In 1887-8 there was profit sufficient to extinguish the debit brought forward and pay a dividend on the A shares of 8 per cent., out of the profits of 1888-9 the A shares got 6 per cent. Carried forward £1,557. After payment of this distribution there remained (to July 31st, 1889) arrears of dividend on the A shares of 13 per cent.

Directors :

Sir H. H. Vivian, Bart., Chairman.	
R. W. Lindsay, Birmingham.	T. Lea, M.P.
A. S. Merry, Swansea.	G. W. Campbell.

Head Offices and Works : A. S. Merry, Managing Director, Hafod Works, Swansea, Wales.

CANADIAN OFFICE :

G. N. Hendrickson and F. R. W. Daw, Joint Managers, Sudbury, Ont.

The company owns certain mineral properties situate in the Townships of McKim, Blezard, and Snider, in the mining district of Algoma, Province of Ontario. Mining operations for copper and nickel were commenced in the fall of 1889, and have been continued steadily since. 150 men employed. Depth of main shaft at 1st October, 1890, 60 feet. Estimated value of machinery-plant, \$40,000. Shipments are made principally to the company's works at Swansea, Wales.

HIGHLAND MINING CO.

Incorporated 25th March, 1875. Capital, \$600,000, in 60,000 shares of \$10 each fully paid up.

Directors :

J. J. Vickers, Toronto, Ont.	Walter MacDermott, New York.
Nicol Kingsmill, Toronto.	M. L. Sibley, Detroit.

Head Office : Toronto, Ontario.

Formed to acquire and work Mineral Location 42, near Jack Fish Lake, in the Township of Moss, in the district of Thunder Bay, Ontario, containing 160 acres. Not in active operation 1890.

HOME STAKE MINING AND MILLING CO. OF MANITOBA AND THE NORTH-WEST (Ltd.)

Incorporated 22nd April, 1884. Authorized Capital, \$500,000, divided into 5,000 shares of \$100 each.

Directors :

Daniel E. Sprague.	
James M. Grew,	George Murdoch,
Robert Young,	James E. Keeling.

Head Office : Winnipeg, Man.

Formed to carry on the business of quartz and surface mining and milling, and to acquire, hold, buy and sell mining property and mining stocks and shares in mines and in mining companies in the Province of Manitoba and the North-West Territories.

HUNGERFORD MARBLE CO. (Ltd.)

Incorporated 28th April, 1888. Capital Stock, \$100,000, in 1,000 shares of \$100 each, of which to date \$90,000 has been subscribed and paid up.

Directors :

P. W. Ellis, President.

P. G. Close,	R. T. Ellis,
W. G. Ellis,	M. C. Ellis.

Head Office : W. G. Ellis, Sec.-Treas., 31 Wellington St. East,
Toronto, Ont.

This company owns 120 acres of mineral lands in the County of Hastings, and operates marble quarries at Madoc, and at Bridgewater, in the Province of Ontario. These are equipped with a good machinery-plant, including 30-ton derrick, diamond drill, channelling machine, one Ingersoll gadder, 35 h. p. boiler, two steam pumps, etc. At Madoc a band of crystalline limestone of the Laurentian series has been opened to a depth of 50 feet for the production of a dark-colored marble of a fair quality, crystalline and dark-colored, polishing almost black. The Bridgewater quarry is 540 acres in extent, and is situated in the Township of Hungerford. The seams vary from six inches to ten or twelve feet apart, the average being about two feet. The marble has a pure white color, clouded bluish and greenish in places, and with bands of pinkish or salmon color in other parts. The marble is closely crystalline, but compact, and is said to weather well. A good band of serpentine is also found on the company's property. Estimated value of plant, \$7,000. The output has not as yet been placed on the market. A large staff of men has been employed opening up the various locations, but at 1st September, 1890, the work had been temporarily suspended.

INVINCIBLE MINING CO. (Ltd.)

Incorporated 6th March, 1889. Authorized Capital, \$50,000, divided into 10,000 shares of a value of \$5 each.

Directors :

Richard Watkins, | John Mohrer, | Robert Evans.

Head Office : Wm. Beveridge, Secretary, Nanaimo, B.C.

Formed to carry on the general business of miners, and to acquire, prospect, work, and develop lodes of gold and silver bearing quartz and other minerals in the Province of British Columbia. Four claims on Texada Island are owned, but not worked, in 1890.

JOGGINS COAL MINING ASSOCIATION.

Capital Stock \$300,000, divided into 100,000 shares of \$3.00 each, fully subscribed and paid up.

Directors :

Robert Cruikshanks, | James Kennedy, *President*, | J. E. Irvine,
John Boyd, | | F. R. Butcher.

Head Office ; Henry Duffell, jr. Sec.-Treas., St. John, N.B.

This company is the owner of the Joggin's Colliery, situate at Joggin's Mines, Cumberland County, Nova Scotia, at present being worked under lease by the Phoenix Coal Co. of St. John, N.B.

JOHNSONS' ASBESTOS CO. (Ltd.)

Incorporated 1886, under letters patent from the Local Legislature of Quebec. Capital \$250,000, in shares of \$100 each, fully subscribed and paid up.

Directors :

Hon. George Irvine, Quebec, *President*,
John Mooney, Inverness, Que, | W. J. Johnson, Clapham, Que,
Samuel J. Johnson, Inverness, Que. | Lawrence Lynch, Quebec, Que.
A. S. Johnson, Thetford, Que.

Head Office : Quebec, Que.

Formed to acquire and work asbestos and other mineral lands in the Province of Quebec, particularly Lot 27, 6th Range of Thetford, and Lots 25, 26 in the 10th Range of Ireland, also Lots 25, 29 30 in Range 3 of the Township of Coleraine, all in the County of Megantic. In 1889, the production of asbestos was :

No. 1 Quality.....	950	TONS
No. 2 Quality.....	250	

1,200 tons.

JOHNSON'S ASBESTOS CO.—Continued.

Exports mainly to the United States and Europe. An average number of 150 men are employed. Mines well equipped with buildings and machinery. In 1888 a dividend of 23 per cent. and in 1889 a dividend of 33 per cent. was paid to the shareholders.

Managing Director : A. S. Johnson, Thetford, Que.

KEMPT GOLD MINING CO.

Incorporated 1886. Authorized capital \$30,000, divided into 100,000 shares of 30 cents each.

Directors :

Joseph R. Kinney, Yarmouth, N.S.	
Joseph R. Wyman, Yarmouth, N.S.,	R. S. Eakins, Yarmouth, N.S.,
A. W. Eakins, Yarmouth, N.S.,	G. W. Johnson, Yarmouth, N.S.

Head Office : Yarmouth, N.S.

Formed to acquire and work certain gold areas in Yarmouth County, in the Province of Nova Scotia. Was not in active operation during the year 1889.

Mine Superintendent : W. N. Nash, Kemptville, N.S.

KING BROTHERS.

15 Bell's Lane, Quebec, Que.

A private company owning and operating about 2,500 acres of mineral lands in the Townships of Ireland and Thetford, Que.

About 200 men and boys employed. Mines well equipped with buildings. The plant includes Rand compressors (7 drill), 3 Copeland & Bacon hoisting engines, 2 steam pumps, etc., etc. Output for 1889 estimated to have been about 1,500 tons.

General Superintendent : Wm. King, Thetford, Que.

KINGSTON PHOSPHATE MINING CO.

Registered April, 1890. Authorized Capital £5,000, in shares of £1 each.

Directors :

	G. C. Lomer, <i>Chairman</i> .	
R. C. Richards,		Wm. Adams.

Chas. M. Anderson, Secretary, 4 Fenchurch Ave., London, E.C.

Canadian Office : Lomer, Rohr & Co., Custom House Chambers, Custom House Square, Montreal.

Formed to acquire and work certain phosphate properties, containing in all 200 acres, and situate in the Township of Loughborough, County of Frontenac, Province of Ontario. Mining operations were begun in August, 1890. 25 men employed.

KINGSTON VALLEY LEAD MINING CO.

Registered 28th March, 1874. Authorized Capital, £50,000, in shares of £1, of which 39,257 were issued.

Head Office : 164 Gresham House, London, E.C., Eng.

Formed to adopt an agreement dated 14th February, 1874, between the Kingston Limited Lead Mining Company and Charles Samuel Dalkins, on behalf of his Company Being wound up voluntarily.

KOOTENAY NUMBER ONE MINING CO. Ltd.

Incorporated 19th June, 1889. Authorized capital \$600, divided into 120 shares of a value of \$5 each.

Directors :

C. B. Bellinger,	|	J. W. Smith.
		C. H. Prescott,

Head Office : Ainsworth, Kootenay District, B.C.

Formed to buy, sell, lease, own operate and control mines and mining properties within the State of Oregon, and the Territories of Washington and Idaho, and also in the Province of British Columbia.

KOOTENAY SMELTING AND TRADING SYNDICATE, (Ltd).

Incorporated 4th November, 1889. Authorized Capital, £40,000, divided into 3,990 Ordinary shares of £10 each, and 10 Founders' shares of £10 each.

Directors :

C. B. Lowe,	|	C. J. Bostock,
Wm. J. Trudgett,	|	J. G. Cunningham,
C. I. Christy,	|	T. G. Wynton-Davies.
		M. McC. Bruce.

Canadian Office : F. Storer Brown, 11 Notre Dame Street, Winnipeg, Man.

Formed to erect smelting works at Revelstoke or Golden City, or other places in the Kootenay district, or elsewhere, on or near the Canadian Pacific Railway, and thereby or otherwise to obtain from the Government of the Dominion of Canada, and any government or municipal authority, or from any company or companies, or person or persons, concessions and grants of land, rights and privileges for building and other purposes, and all bonuses, whether in the form of land or currency, or partly in land and partly in currency, that may be offered by the Government of the Dominion of Canada, of the Government of British Columbia, and generally to acquire in the said district or elsewhere, estates, properties, rights and privileges of every description. (b). To acquire mining properties and claims, or shares or other interests in such properties or claims, in the said Kootenay district or elsewhere in British Columbia, and to investigate and explore any such properties or claims be-

KOOTENAY S. & T. SYND.—Continued.

fore acquiring any interest therein, and to develop and work, or re-sell and dispose of the same, and to act as agents for procuring and selling concessions, claims, properties and rights of all descriptions in British Columbia, etc., etc.

The Company owns 320 acres of mineral land at Revelstoke, in the Kootenay district, Province of British Columbia. The company erected smelting and sampling works in 1889, and is prepared to smelt ores at a stipulated price per ton, or will defray all charges on consignments, and after deducting therefor, pay their cash value, based on the assays obtained. The works are equipped with an excellent plant.

Superintendent : Dr. Campbell, Revelstoke, B.C.

KOOTENAY VALLEYS CO., (Ltd).

Registered 18th March, 1887. Capital, £100,000 stg., in shares of £5 each, of which £25,000 in fully paid shares was taken by the vendor. The balance of 15,000 shares of £5 each, were offered for subscription in March, 1887, payable 10s. on application, £1 10s. on allotment, £1 10s. three months after allotment, and the balance at three months notice as required.

Directors :

Henry Seton Kerr, M.P.,
Gen. Sir H. J. Warre, K.C.B.,
Thomas Bate, J.P.,

John Rae, LL.D., F.R.S.,
W. A. Baillie-Grohmann,
R. H. Venables Kyrke.

Head Office : R. M. Rands, Secretary, 46 Queen Victoria Street, London. E.C.

Formed to carry out an agreement under date of 16th March, 1887, between the Kootenay Syndicate, Limited, and R. M. Rands, to acquire and work mineral lands in the Upper and Lower Kootenay Valleys in the Province of British Columbia.

LAKE LODGE MINING CO.

Incorporated December, 1886, under laws of the State of Maine, U.S.A. Capital, \$75,000, fully subscribed and paid up.

Directors :

Henry Sawyer, Boston, Mass., *President.*

J. B. Spalding, Boston, Mass.,
L. L. Wadsworth, Boston, Mass.,

L. L. Tuttle, Boston, Mass.,
Alvin Clarke, Boston, Mass.

Head Office : J. B. Spalding, Sec.-Treas, 27 Broad Street, Boston, Mass.

This Company holds 175 gold areas under lease from the Government of Nova Scotia, situate in the district of Caribou. An average of 16 men are employed. Five stamp-mill, steam hoisting and pumping gear, etc. The official returns of production for the year 1887 show a yield of 368 oz., 1 dwt. of gold from 959 tons quartz crushed.

Superintendent : L. L. Wadsworth, Caribou gold mines, Caribou, N.S.

LAKE OF THE WOODS MINING AND MILLING CO.

Incorporated 18th July, 1884. Authorized Capital \$10,000, divided into 200 shares of a value of \$50 each.

Directors :

William Nasson Kennedy,		
Geo. Frederick Carruthers, Samuel H. McMillan, Chas. Osborne Wickenden,	|	John W. Harris, Henry S. Crothy, L. McMeans.

Head Office : Winnipeg, Man.

Formed to mill, mine and manufacture gold, silver, copper and other ores and minerals; to acquire, buy and sell mining stocks, mines and mining claims, and interest in mines and mining claims, with power to acquire, buy and sell, lease, rent, mortgage and generally deal with mines and mining claims; to construct and maintain buildings, machinery and other erections, with power to borrow money and such other powers as are useful and necessary in exercising the objects of the Company. Operations to be carried on in the County of Varennes, Province of Manitoba.

LAKE SUPERIOR MINERAL LAND DEVELOPMENT CO.

Incorporated 26th October, 1887, under the laws of the State of Illinois. Authorized Capital, \$1,000,000.

Directors :

M. H. Kilgallen,		
George Thomas, C. F. Linscott, R. E. L. Russell,	|	P. M. French, W. S. Coffman, J. E. Clapp.

Secretary : M. H. Kilgallen, Mayfair P. O., Cook County, Ill.

On the 1st September, 1890, the lands of the Company were advertised for sale. Little or no development has been done.

LAKE SUPERIOR MINING CO., (Ltd).

Registered 31st May, 1889. Authorized capital £20,000, in shares of £1 each, of which 914 have been issued as 7 per cent. preference shares. No ordinary shares have as yet been allotted, but 7,256 ordinary and 435 preference shares will be allotted to the shareholders of the Lake Superior Copper Company, in liquidation, as the purchase consideration for the property. One fully paid share is to be issued to the shareholders in the Lake Superior Copper Mining Company, Limited, for any four shares held in that company.

Directors :

W. T. F. M. Ingall, D. Morris,	|	G. D. Ingall, W. C. Lewis.
-----------------------------------	--	-------------------------------

**Head Office : E. E. Probert, Secretary, Abchurch Chambers,
London, England.**

LAKE SUPERIOR M. CO.—Continued.

Formed for the purpose of acquiring the property of the Lake Superior Copper Company, Limited, consisting of about 7,284 acres, situate on the N. E. shore of Lake Superior. The property formerly belonged to the Lake Superior Native Copper Company.

LAKE SUPERIOR NATIVE COPPER CO., (Ltd).

Registered 3rd May, 1881. Capital £103,442 in fully paid shares of £1, of which £22,600 is in vendor's shares, and the balance in ordinary shares.

Directors :

	W. F. Rae, Chairman.	
J. Jephson,	|	E. A. Pontifex.

Head Office : D. Morris, Sec., Abchurch Chambers, Abchurch Lane, London, E.C., England.

See Lake Superior Mining Company.

LA SOCIÉTÉ CANADIENNE D'ÉTUDE MINÉRIES.

Incorporated 17th April, 1889. Authorized Capital \$100,000, divided into 1,000 shares of a value of \$100.00 each.

Directors :

	M. Schwab, Montreal,	
C. A. Dugas, Montreal,	|	L. P. deLavallée, Montreal,
C. H. A. Grant, Montreal,	|	E. Werner, Montreal,
John S. Hall, M.P.P., Montreal.	|	Cyrille Duquet, Quebec.

Head Office : 30 St. Francois Xavier Street, Montreal.

Formed for the purpose of facilitating the development of the mining industries of the Province of Quebec by having analyses made by its chemists and engineers and by opening up mines and quarries, etc., etc.

LAURA HYDRAULIC MINING CO. (Ltd.)

Incorporated 6th June, 1889. Authorized Capital \$20,000, divided into 20,000 shares of \$1.00 each.

Directors :

John Grant,	|	Morris Moss,	|	Alex. Gilmour.
-------------	--	--------------	--	----------------

Head Office, : Victoria, B.C.

Formed for the mining of gravel, sand and quartz for precious metals in the Province of British Columbia, the acquisition by purchase or otherwise, of a sawmill and premises at Rock Creek, district of Yale, British Columbia, etc.

LITTLE RAPIDS MINING CO.

A Private Company consisting of the following

Owners :

W. A. Allan, Victoria Chambers, Ottawa, Ont.
Major W. H. Holbech, Burnham House, Oxford, Eng.

Head Office : Victoria Chambers, Wellington Street, Ottawa, Ont.

The company owns some 600 acres of phosphate lands, in the 1st Range of Portland East, in the County of Ottawa, Province of Quebec, and is the owner of the Little Rapids Phosphate mines, situate at Little Rapids, on the left bank of the Lievres river, in the Range, Township, and County aforesaid. Main shafts 210 feet and 190 feet respectively; tramway $\frac{7}{8}$ of a mile from mines to wharf, narrow gauge, steel rails. The working plant includes a Rand compressor, 3 Ingersoll and 1 Rand Drills, winding engine, 3 boilers, Knowles pumps and other machinery plant. Well equipped with suitable accommodation for a large force of miners. A small force employed, 1890.

LOW POINT BARASOIS & LINGAN MINING CO. (Limited.)

Incorporated 9th March, 1883. Capital \$600,000, in shares of \$100 each, with power to increase it to \$1,000,000. The first issue was for \$500,000, of which \$200,000 was issued to the vendors in part payment for the property. All the shares issued are fully paid,

Executive Board :

J. D. Hill, London, Eng.,
F. W. Bigge, London, Eng., | W. S. Cunard, London, Eng.

Canadian Board :

Hon. A. G. Jones, Halifax, N. S.,
W. J. Stairs, Halifax, N. S., | Thos. E. Kenny, Halifax, N. S.,
R. P. Starr, St. John, N. B., | L. M. Smith, Halifax, N. S.

Head Office :

E. C. Bigge, Secretary, Bloomfield House, London Wall, London, E.C.

CANADIAN OFFICE :

G. E. Francklyn, Secretary, 32 Bedford Row, Halifax, N. S.

Formed to acquire and work certain coal mining properties on lease from the General Mining Association. The Company holds some sixty square miles of coal areas on the island of Cape Breton, in the Province of Nova Scotia, and is the owner of the Victoria Colliery, situated on the south shore of Sydney Harbor, C. B. Seam 6 ft. 9 in., dipping at an angle of $\angle 25^\circ$. Depth of slopes about 1,900 feet. The coal is used largely in the manufacture of gas, for which purpose it is well suited. The yield of gas per ton is stated to be 9,700 cubic feet. An analysis of a specimen (Geol. Survey) gave:

Volatile matter	33.84
Fixed carbon	63.60
Sulphur	0.77
Ash	1.79

LOW POINT B. & L. M. CO.—Continued.

The total output of coal during the year ended 31st December, 1889, is officially reported to have amounted to 108,601 tons. Three hundred and sixteen men and boys were employed above and below ground. The coal sales for the same period were as follows:—

To Nova Scotia	22,828
To New Brunswick	7,983
To Prince Edward Island	11,635
To Quebec	17,880
To Newfoundland	17,414
To Bunker steamers	11,571
To Colliery employees	1,810
Total coal sales 1889	91,121

Accounts to 31st December each year. For 1887-8-9 5 per cent. was paid each year on the ordinary shares publicly held. For 1888 the ordinary shares issued to the vendors got 3½ per cent., and for 1889 2½ per cent.

General Manager, R. H. Brown, Sydney Mines, Cape Breton, N. S.
Resident Manager, Robert Robson. | *Underground Manager*, John Weir.

MacLAURIN PHOSPHATE MINING SYNDICATE (Limited)

Registered 30th November, 1889. Authorized Capital £20,000 Stg., divided into 20,000 shares of £1. Shares taken, 150. Amount per share called up 10s. Number shareholders at date of last return, 15.

Directors:

Wm. Howard Smith, *Chairman*.

G. Washington Charlwood,	|	Benjamin Hills,
William Adams,		C. H. Hoare.

Offices:

C. M. Anderson, Secretary, 4 Fenchurch Avenue, London, E.C.

A. Hunter & Co., 4 Fenchurch Avenue, London, E.C., Agents in the United Kingdom.

Messrs. Lomer, Rohr & Co., Custom House Chambers, Custom House Square, Montreal, Que.

Formed to acquire and work 1,800 acres of freehold lands, situate in the district of East Templeton, County of Ottawa, Province of Quebec. 50 men employed. Estimated value of machinery plant, \$5,000.

McMILLAN, KITTRIDGE & CO.

Organized 1st May, 1886. Capital \$36,000.

Partners:

George Sanson,
N. Rainsberry,

William Stevenson,

James McMillan,
H. Kittredge.

Head Office: James McMillan, Managing Partner, Petrolia, Ont.

H. Kittredge, Superintendent of Works.

This Company carries on business as producers and refiners of petroleum. Seven wells, average depth, 460 feet; daily product of the whole, seven barrels. Average yearly turnout of crude oil, 2,100 barrels; average yearly turnout of refined oil, 18,000 barrels. Employed at works, twelve men. Estimated value of machinery plant at wells and works, \$36,000. The Company's manufactures include machine, cylinder and engine oils, illuminating oils, also benzine and gasoline prepared by a patented process. The Company operates the Lambton Oil Works at Petrolia, and the Stratford Oil Works at Stratford, all in the Province of Ontario.

MEGANTIC MINING CO. (Ltd.)

Incorporated 1886, under Letters Patent from the Government of the Province of Quebec. Capital Stock \$250,000, in shares of \$100 each, fully subscribed and paid up.

Directors:

Dickson Anderson, Montreal,
James Cooper, Montreal,
John Lee, Montreal,

Wm. Sclater, Montreal,
Alfred Bennet, Montreal.

Head Office: Alfred Bennet, Secretary-Treasurer, Montreal House Building, Custom House Square, Montreal.

Formed to acquire, work and further develop the property formerly owned by the Coleraine Mining Company, and situate in Range A., Coleraine, Que. In 1890, the property was being worked under lease by the White's Asbestos Company, a party of fifty men being employed under the direction of Mr. Lucius Boyd, M. E.

MINING AND DEVELOPMENT COMPANY OF NORTH AMERICA.

Incorporated August, 1890. Authorized Capital, \$1,000,000, divided into 40,000 shares.

Directors:

R. D. Evans,
C. A. Coffin,
Albert Stone,

Gilbert Parker,

E. L. Sanborne,
J. S. Bartlet,
R. R. McLeod.

Head Office: E. B. Eustin, 54 Sennerst Street, Boston, Mass.

Formed to acquire and work 1,300 acres of gold mining lands situate in the Gay's River district, Colchester County, Province of Nova Scotia.

MONTREAL MANGANESE MINING CO.

Incorporated 1886. Authorized Capital Stock \$100,000, divided into 10,000 shares of \$10

Directors :

H. T. Harding, Maitland, N. S.
 David Andrews, Moose Brook, N.S. | Thos. Ralph, Moose Brook, N.S.

Head Office : Maitland, Hants County, N. S.

Formed to acquire and work certain manganese areas in Hants County, in the Province of Nova Scotia. Was not in active operation during the year 1889.

MOOSELAND GOLD MINING CO. (Ltd.)

Incorporated 1890. Capital Stock \$100,000, in 10,000 shares of a value of \$10 each.

Directors :

Wm. J. Stewart, Halifax, N.S.
 H. G. Stemshorn, Halifax, N.S., | Thomas Brown, Halifax, N.S.

Head Office : Halifax, Nova Scotia.

Formed to acquire, work, and further develop mineral lands in the Province of Nova Scotia.

MURILLO SILVER MINE (Ltd.)

Registered 1889. Capital, £60,000, in shares of £1 each.

Head Office : Richard Winder, Secy., 7 East India Avenue, London, Eng.

Formed to acquire, work and further develop the Murillo Silver Mines estate, consisting of the south half of Lot 5, in the 2nd Concession of the Township of Oliver, in the District of Algoma West, Ontario, in all 60 acres. 25 men employed. Depth of shaft 87 feet. Machinery plant includes 25 h. p. engine and boiler (Cope-land & Bacon), 60 h. p. boiler (A. R. Williams), Worthington & Northey pumps, etc., and is estimated to be of a value of \$3,000. Up to 1st September, 1890, ore and bullion of a value of \$10,000 has been produced.

Manager : J. S. Winder, Murillo, Ont.

Geo. Sowerman, Chemist and Assayer. | *F. R. Winder, Engineer.*

NELSON ISLAND GRANITE CO. (Ltd).

Incorporated 16th October, 1889. Authorized Capital, \$30,000, divided into thirty shares of a value of \$1,000.

Directors :

James C. Prevost,
E. J. Thain, | Robt. L. Fox.

Head Office : Edward J. Thain, Secretary, P.O. Box 654, Victoria, B.C.

Formed to acquire and work the Nelson Island Granite quarry, and the whole of the hereditaments whereof the quarry forms part; the acquisition and sale of land suitable for quarrying stone, for farming, and for timber, and generally for doing all such things as are conducive or incidental to the attainment of the above objects, or any of them. Property contains 320 acres, and is situate on Nelson Island, Province of British Columbia. 20 to 30 men employed. The quarry was not opened until November, 1889; up to 1st January, 1890, 500 tons had been raised and shipped.

NEW BRUNSWICK SILVER & GOLD MINING CO.

Incorporated 24th April, 1888. Authorized Capital, \$280,000, divided into 140,000 shares of \$2 each.

DIRECTORS :

Ed. J. Baxter,
Alex. J. Grant, | W. K. Kennard.

Head Office : Waterford, King's County, N.B.

Formed to purchase and hold all kinds of mineral lands and lands in which minerals are supposed to be, with land requisite and necessary to carry on a mining business and the selling, mortgaging and encumbering all or any such lands; the carrying on of a general mining business and to search for mines and minerals and to purchase, hold, own and sell all kinds of property connected with and necessary or convenient for the carrying on of a general mining business; and the digging for, mining for, and procuring by all lawful means of all manner of minerals and mineral substances, including silver, gold, lead and every other kind of minerals and mineral substances; the erection and maintaining of all necessary works, buildings and ways, and doing all things necessary to the carrying on of the business of the said Company.

NEW EGERTON GOLD MINING CO.

A private Company, consisting of the following

Owners :

J. A. Fraser, New Glasgow, N.S., | R. McGregor & Son, New Glasgow, N.S.

Head Office : New Glasgow, Nova Scotia.

This Company holds, and is operating, some 96 gold areas, held under lease from the Government of Nova Scotia, situate at 15 Mile Stream, Halifax County, Nova Scotia. An average number of 50 men are employed. 15 stamp-mill, steam hoisting and pumping gear, etc.

Mine Manager : J. A. Fraser, 15 Mile Stream, Halifax Co., Nova Scotia.

NEWFOUNDLAND COLONIZATION AND MINING CO. (Ltd).

Registered in London, 6th May, 1889. Capital £240,000, in shares of £3 each.

Directors :

	Right Hon. Lord Thurlow, <i>Chairman.</i>
Chas. Clark,	H. Wilson,
A. H. Baker,	Hon. A. W. Mackay.

Head Office : E., A. J. Lavington, Secretary, 9 New Broad Street, London.

NEW GLASGOW COAL, IRON & RAILWAY CO. (Ltd).

Incorporated 1888, under charter from the Legislature of Nova Scotia. Capital \$1,000,000, in shares of \$100 each, of which to date \$400,000 have been subscribed and fully paid up.

Directors :

	John F. Stairs, Halifax, N. S., President.
Thos. Bayne, Halifax,	Wm. Jack, Glasgow, Scotland,
Graham Fraser, Halifax,	J. F. MacKay, New Glasgow, N.S.
John P. Mott, Halifax.	Harvey Graham, New Glasgow, N.S.

Head Office : Harvey Graham, Managing Director, New Glasgow, N. S.

This company commenced mining operations on 22nd July, 1889, first upon the Cameron area, at Bridgeville, in the County of Pictou, of which it is the owner of the ore in fee simple. The shafts on this area are 70 feet and 80 feet deep respectively, and are about 200 feet apart, connected by levels following the vein. The vein varies in width from 5 feet to 27 feet, and in the most northerly of the shafts continues to yield an excellent quality of ore at the lowest depth yet reached. In September, 1889, operations were begun upon the McDonald property at Bridgeville, of which the company is also the possessor of the ore in fee simple. A slope 300 feet following the vein has been sunk, inclination varying from 15° to 35°. At a point 75 feet below the crop of the ore a level is driven 200 feet south and north, all in ore, and at 150 feet below the crop of the ore the second level is driven 225 feet south and 100 feet north; below this lower level the slope is sunk about 130 feet, and the quality of the ore improves towards the dip. The ore-body is, however, all of an excellent quality, the difference between the upper and lower parts being but a larger proportion of coarse ore to the dip. At Upper Stewiacke the company has also opened a deposit of red hematite, from which several hundred tons have been raised to date. At Brookfield, in Colchester County, operations have been continued on the brown hematite vein there. The shaft at this mine is 83 feet deep, the crop of the vein is met at a depth of 15 feet; at 32 feet a level is driven 150 feet west and 100 east, and the vein has an average width of 22 feet. At Black Rock, on East River, Pictou County, a large and very promising vein of brown hematite has also been opened. This property covers an area of one square mile, and is held by the company under lease from the Crown. About 6,000 tons of ore had been raised to 1st August, 1890.

At July, 1890, 93 men and boys were employed by the company. The machinery plant comprises :—Cameron Pit : 1 portable hoisting engine and 1 Cameron sinking pump; Macdonald Pit : 1 upright boiler, 1 cylinder hoisting engine, and Cameron (ordinary) steam pump; at Brookfield : 1 upright boiler, 2 cylinder hoisting engines, Cameron pumps, etc., etc. At all mines there are tramways, trolleys, etc. Negotiations are pending for the construction of a line of railway, smelting furnaces and other works.

Mine Manager : R. E. Chambers, Bridgeville, Pictou County, Nova Scotia.

NEW ROCKLAND SLATE CO.

Capital, \$150,000, fully subscribed and paid up.

Directors :

Hon. G. A. Drummond, President.		
James Ferrier, Sutherland Stayner, Peter Redpath,	|	Thos. M. Taylor, F. R. Redpath, A. Dunbar Taylor.

Head Office : T. P. Bacon, Secretary, 377 St. Paul Street, Montreal.

This company owns and operates the extensive slate quarries situate at New Rockland, in the Province of Quebec. 200 men employed. Average yearly production about 6,500 tons. The manufactures include roofing slates, billiard-table tops, mantels, wash-tubs, hearth-stones, tiles, etc. Quarries and works equipped with an excellent plant, with first-class water-power, transmitted to the works by cable, and an outfit of travelling derricks, etc. The quarry has at present a depth of over 200 feet, and is connected with the main line of the Grand Trunk Railway, four miles distant, by a narrow-gauge railway, by which a great saving in the cost of transportation is effected.

Quarrymaster : Capt. Williams, Richmond, Que.

NICOLA MILLING AND MINING CO. (Ltd).

Registered in London, Eng., 1st July, 1887. The authorized Capital is £50,000, in £1 shares, of which £35,000 has been allotted and £30,781 5s. paid up; 12,500 shares (allotted to the vendors) being fully paid, and £22,500 shares having 16s. 3d. paid up.

Directors :

George Hopkins, Chairman.		
E. C. Morgan,	|	E. Gotto.

Head Office : Chas. Akers, Secretary, 11 Abchurch Lane, London, E. C., England.

Formed to acquire some 2,000 acres of mining properties situate on Mineral Hill, above Stump Lake, Nicola, in the Province of British Columbia. The consideration for the property was £17,713 14s., payable £12,500 in fully paid shares, and £5,213 14s. in cash. Annual reports are issued to 31st August, and meetings held in December of each year. The main operations of the company are on three claims, — "Joshua," "Tubal-Cain" and "King William." Work done to 31st December, 1889, on the Joshua: Main double compartment shaft, 400 feet; air-shaft connecting with 100-ft. level, 85 feet; drifts on 100-foot level, 175 feet; drifts on 200-foot level, 220 feet; drifts on 300-foot level, 350 feet—total, 1,230 feet. Tubal-Cain: Main double compartment shaft, 220 feet; air-shaft connecting with 50-foot level, 40 ft.; drift on 50-foot level, 160 ft.; drifts on 116-foot level, 300 ft.; drifts on 220-ft. level, 200 ft.; tunnel connecting with 116-foot drift, 290 feet; tunnel to connect with 220-ft. drift 400 feet—total, 1,610 feet. King William: Main double compartment shaft, 175 feet; air and other shafts, 75 feet; drifts 100-foot level, 180 feet; drifts 175 foot level, 102 feet—total, 532 feet. On the other mineral

NICOLA M. & M. CO—Continued.

claims owned by the company considerable prospecting work has been performed, aggregating 200 feet of shafts and a large number of open cuts; and on the "Joshua," "Tubal-Cain" and "King William" horse whims have been used for hoisting purposes. As the reduction machinery contemplated by this company is of large capacity, and will require a large outlay of capital to ensure a permanent supply of ore, a steam hoist has been put in so as to sink the "Joshua" 200 feet deeper and run drifts on 500 and 600-foot levels. The ore is chiefly grey copper, galena, and iron pyrites, carrying both gold and silver. The ledges average in size about 2 ft. On an average 25 persons are employed underground.

Mine Superintendent: Wm. Wills, Stump Lake, Kamloops, B.C.

NORTH AMERICAN PHOSPHATE CO.

Incorporated 1888. Authorized Capital \$18,000.

Directors:

	Ex. Ald. Dupuis, Montreal.	
A. Holden, Montreal.	|	R. Prefontaine, Q.C., M.P. Montreal
A. Gagnon, Montreal,	|	C. H. Walters, Montreal.
	S. Lachance.	

Head Office: A. Gagnon, Secretary, 30 St. Francois Xavier St., Montreal.

Formed to acquire and work phosphate lands in the Province of Quebec. The property controlled includes Lots 17 and 18 in the 8th Range, S½ of 18 and 19 in the 9th, and S½ of 18 and 19 in the 10th Range, in the Township of Templeton, County of Ottawa, Province of Quebec. Some development was done in 1888, but operations were suspended owing to shortage in working capital, and it is understood that the property is now for sale.

NORTHUP MINING CO. (Ltd).

Incorporated 1890. Capital \$200,000.

Directors:

T. W. Wheelock, Boston, Mass.,	<i>President</i> ,
J. P. Ilsley, Philadelphia, Pa.,	<i>Vice President</i>
J. H. Dingee, Philadelphia, Pa.,	<i>Sec.-Treasurer</i> .

Head Office: 330 Walnut Street, Philadelphia, Pa.

Formed to acquire, work and further develop the property formerly owned and operated by the Northup Gold Mining Company, at Central Rawdon, Hants County, Nova Scotia. About \$15,000 has been expended in the construction of suitable buildings, erection of plant and other improvements. The machinery includes a 10 stamp mill, hoisting and pumping gear, etc. Depth of main shaft at 1st August, 1890, 50 feet; length of vein opened 1200 feet. An average of 60 men and boys are employed.

General Manager: C. E. Willis, Central Rawdon, P.O. Hants County, Nova Scotia.

NORTHWESTERN COAL & NAVIGATION CO. (Ltd).

Registered 25th April, 1882. Authorized Capital is £150,000, £150,000 being in ordinary shares of £10, and £900 in deferred shares of £100. The ordinary shares rank first for cumulative dividends of 15 per cent. per annum. Of the ordinary capital, £149,500 has been issued and paid, and all the deferred has been issued as fully paid. There are also 6 per cent. debentures of £100 each, to the amount of £210,500, with coupons payable June 30th and December 31st, redeemable in 1904; and £2,862 is one in respect of lands purchased.

Directors :

	Sir W. Lethbridge, <i>Chairman</i> ,	
W. Burdett Coutts, M.P.	|	W. Ford,
E. Crabb,		P. Redpath.
	W. M. Ramsay.	

Head Office : 37 Old Jewry, London, E.C.

The Company owns the Lethbridge Colliery at Lethbridge, in the North-West Territories. The accounts are made up annually to June 30th, and submitted in November. A dividend of 9½ per cent. was paid for the period ending December 1883, and for 1884 and 1885, 5 per cent. was paid (not per annum). For 1886 and the half year to June, 1887, there was no distribution. For the year to June, 1888, 5 per cent. was paid, and a similar distribution was made for 1888-9. Net proceeds of land sales £31,825, have been placed in suspense. The Alberta Railway and Coal Company was in course of construction at 1st September, 1890, to take over the properties of the company and to construct a line connecting the mines with Montana. See Alberta Railway and Coal Company.

NORTHWESTERN GOLD & SILVER MINING CO.

Registered 26th May, 1890. Capital Stock, \$1,000,000, divided into 5,000 shares of the par value of \$20 each.

Head Office : Victoria, B.C.

Formed to mine for gold and silver and other precious metals, by hydraulic and other methods, in British Columbia, and to this end to acquire all the real and personal property and water rights necessary.

NOVA SCOTIA COAL & RAILWAY CO. (Ltd).

Incorporated, 1889. Capital Stock, \$500,000, divided into 5,000 shares of \$100 each.

Directors :

	Sandford Fleming, C.M.G., Ottawa, Ont.,
Hon. Alex. McFarlane, Wallace, N.S.,	| C. E. Staynor, Halifax,
R. G. Leckie, Londonderry, N.S.	

Head Office : Halifax, N. S.

Annual meeting on 3rd Thursday of February in each year.

NOVA SCOTIA MIDLAND RAILWAY COAL & IRON CO. (Ltd).

Incorporated by Act of the Nova Scotia Legislature 16th April, 1888; amended by Act dated 17th April, 1889. Authorized Capital, \$1,000,000, divided into shares of a value of \$100 each.

Directors :

Herbert Richmond, 82 Broadway, New York, <i>President</i> .	Wm. Rose, Halifax, N.S.,
S. H. Holmes, Halifax, N.S.,	B. W. Chipman, Halifax, N.S.,
John A. Hilton, New York,	H. W. Leslie, New Glasgow, N.S.
William M. Walton, New York,	
<i>Secretary</i> : Wm. M. Walton, 52 Broadway, New York.	

Head Office : H. W. Leslie, General Manager, New Glasgow, N.S.

This Company controls some thirty square miles of iron, coal, and other mineral lands in the Province of Nova Scotia, and is at present constructing a line of railway from New Glasgow to Sunny Brae, a distance of 18½ miles. When this line is completed, the development of the Company's mines will be proceeded with. Up to 1st September, these lands had only been prospected.

OLDHAM GOLD CO.

Owners :

John E. Hardman, Oldham, N. S., | Frederick Taylor, Lowell, Mass.

Head Office : Oldham, N.S.

This Company holds a property consisting of some 384 gold areas, situate in the District of Oldham, in the County of Halifax, in the Province of Nova Scotia. The mines, which have been operated since 1884, have been thoroughly and systematically developed, and at date consist of the following workings: East shaft, (Dunbrack lode), 470 feet deep: main shaft 350 feet deep and to connect with 450 foot level. No. 1 west, 263 feet; No. 2 west, 158 feet; No. 3, 165 feet. Levels have been driven for over 1,300 feet on the vein. Aggregate extent of openings 3,000 feet. Baker mine, opened by two shafts, No. 3 and No. 5. No. 3, 275 feet deep; No. 5, 420 feet. Levels driven for an aggregate distance on the veins of 600 feet. The total shafts and levels will exceed 1,000 feet. Average number of men employed, 25. Ten stamp-mill (water power), hoisting, pumping, and other machinery.

Managing Owner : John E. Hardman, S. B., Oldham, Nova Scotia.

ONTARIO MINING CO. (Ltd).

Incorporated 2nd August, 1889. Capital Stock, \$20,000; in 2,000 shares of \$10 each, fully subscribed and paid up.

Directors :

John S. Ewart, Winnipeg, <i>President</i> ,	J. G. Bennett, St. Paul, Minn.,
H. G. McMicken, Winnipeg,	M. M. Wheeler, St. Paul, Minn.
H. J. Belch, Winnipeg,	

Head Office : J. K. Strachan, Secretary, 376 Main St., Winnipeg.

ONTARIO M. CO.—Continued.

The property owned by this Company contains 400 acres, and is situate on Sultana Island, in the Lake of the Woods Mining District, Province of Ontario. Thirteen men employed. The annual meeting is held on the second Monday in May of each year.

ONTARIO NATURAL GAS & FUEL CO.

Incorporated 1889. Capital \$12,500.

Directors :

N. A. Coste, President, Amherstburg, Ont.,	
D. Coventry, Windsor,	Col. Atkinson, Detroit,
M. A. MacHugh, Windsor,	Hiram Walker, Detroit.

Head Office : Windsor, Ont.

This Company has acquired some 30,000 acres under lease in the County of Essex, Ontario. Three wells have been bored to a depth of over 1,000 feet, at a point thirty miles from the Town of Windsor, yielding an estimated flow of 10,000 cubic feet.

ORMSTOWN BRICK & TERRA COTTA CO. (Ltd)

Incorporated 25th August, 1888. Authorized Capital \$50,000, divided into 500 shares of a value of \$100 each, the whole of which has been subscribed and fully paid.

Directors :

George McCullough, President, Ottawa, Ont.,	
J. H. Shaw, Shawville, Que.	J. Geo. Butterworth, Ottawa, Ont.
G. W. Cameron, Montreal, Que.,	R. N. Walsh, Ormstown, Que.

Head Office : W. D. Ross, Secretary, 86 Sparks St., Ottawa Ont.

This Company's property contains twenty-eight acres of land at Ormstown. During the year 1899 from 75 to 90 men were employed, and the production of brick, terra-cotta, tile and other materials amounted in the aggregate to 4,500,000.

Superintendent : George Vaughan, Ormstown, Que.

PARKER-DOUGLAS CO.

Organized 1886, under the laws of the State of Maine. Capital \$150,000, in shares of \$10 each, fully subscribed and paid up.

Directors :

Gilbert Parker, Philadelphia, Pa., <i>President</i>	
R. D. Evans, Boston, Mass.,	Max Bamburger, Philadelphia, Pa.,
Calvin G. Turner, Wilmington, Del.	J. R. Judson, E. Arlington, Vt.,
Simon Gfaelzer, Philadelphia, Pa.,	Thos. Devlin, Philadelphia, Pa.

The Company holds 52 gold areas under lease from the Government of Nova Scotia. Mines well equipped with a first class plant, including 20 stamp-mill, Rand compressor, hoisting and pumping gear, etc. One hundred men employed in 1890.

Managing Director : Gilbert Parker, Malaga, Queen's Co., Nova Scotia.

PENINSULA GOLD MINING CO. (Ltd.)

Incorporated 17th April, 1889. Capital stock \$50,000, divided into 1,000 shares of \$50 each.

Directors :

Robert P. Fraser,
John Yorston,

H. G. Ives,
G. J. Mackenzie.

Head Office : New Glasgow, N.S.

Formed to acquire, hold, lease, sell and convey any mines or natural deposits of gold or gold bearing rock, ore, or earth in any gold district in Nova Scotia, and any gold mining rights or licenses, prospecting or otherwise, in, upon, or over any portion of said Province.

PETROLIA CRUDE OIL TANKING CO.

Incorporated 1874. Capital stock \$50,000, divided into 1,000 shares of \$50 each, of which to date, \$49,376.36 has been subscribed and paid up.

Directors :

Charles Jenkins, *President.*

J. D. Noble,
R. D. Noble,
R. Morris,

J. H. Fairbank,
C. O. Fairbank,
John Fraser.

Head Office : Chas. Jenkins, President, Petrolia, Ont.

This Company owns and operates ten wells, situate on lot 12, in the 12th concession of Enniskillen ; average depth, 470 feet ; average daily capacity of each, one-half to three-fourths of a barrel. The Company has 50 tanks with a storing capacity of about 300,000 barrels. Receiving stations in Township of Sarnia, at Martha-ville, and three at Petrolia. From the 20th of January to the end of December, 1887, the Company received 244,979 barrels and shipped 360,309 barrels ; in the ten months of the year 1888, were received 231,636 barrels, and 206,893 barrels shipped ; in 1884, received 255,768 and shipped 184,214 barrels ; in 1885, received 299,407 and shipped 312,554 barrels ; in 1886, received 253,022 and shipped 240,134. Estimated value of machinery plant \$100,000. Seventeen men and boys employed.

PETROLIA OIL CO.

Incorporated 31st January, 1881. Authorized capital, \$40,000, divided into 1,000 shares of a value of \$40.00 each, of which \$20,040 has been subscribed and paid up.

Directors:

John D. Noble,

Robert D. Noble,

Charles Jenkins.

Head Office : Robert D. Noble, Secretary, Petrolia, Ont.

PETROLIA OIL CO.—Continued.

This Company owns ten acres of land situate in the Township of Enniskillen, in the County of Lambton, in the Province of Ontario. It also operates nine wells, each of an average depth of 460 feet, and yielding in the aggregate five barrels of crude oil per diem. The total production from these wells for the year ended 30th June, 1890, amounted to 1,360 barrels. 13 men employed. Estimated value of machinery plant, buildings, etc., \$7,000.

Superintendent : Andrew Duncan, Petrolia, Ont.

PHILADELPHIA GOLD MINING CO.

Organized 1888. A private Company.

President : E. V. Douglas, Malaga, Queen's Co., N.S.

Head Office : Richard Wetherill, Sec.-Treasurer, Room 81, Bullitt Building, Philadelphia, Pa.

This Company holds and operates 450 gold areas under lease from the Provincial Government, in the district of Brookfield, Queen's County, Nova Scotia; mining operations mainly confined to Dunbrack, and Nelsen leads; during the year ended 31st December, 1889, the official returns reported a yield of 1796 oz., 17 dwt. of gold from 1,472 tons of quartz crushed. Although these mines have necessarily been largely employed in preliminary workings, this output is regarded as most satisfactory, and now that a good working plant is in place, the returns for 1890 are expected to be large. The machinery plant comprises 20 stamp-mill, with the necessary equipment of engines and boilers, pumps, winding-engines, etc. 40 men employed.

Manager : W. C. Gray, Brookfield, Queen's County, N.S.

PHENIX COAL CO. (Ltd).

Incorporated 15th December, 1887, under Letters Patent, from the Government of New Brunswick. Capital \$50,000, in 5,000 shares of \$10 each, fully subscribed and paid up.

Directors :

James Kennedy, *President*.

John E. Irvine,
Robert Cruikshank,

John Boyd,
Fred. R. Butcher.

Head Office : Henry Duffell, Jr., Sec.-Treasurer, St. John, N.B.

This Company is at present operating, under a lease for a period of five years, the colliery owned by the Joggins Coal Mining Association, situate at Joggins mines, Cumberland County, Nova Scotia. The quantity of coal mined in 1889 was 45,411 tons. Two hundred men are employed. At July, 1890, the Company was marketing an output of 250 tons per diem, and by the 1st October, it was expected that this would be increased to 350 tons per day. The present lease will expire on the 31st December, 1892, and the property revert to the original owners.

General Manager : P. W. McNaughton, Joggins Mines, Cumberland County, Nova Scotia.

PHENIX LAND & DEVELOPMENT CO. (Ltd.)

Incorporated 27th May, 1889. Authorized Capital Stock \$10,000, divided into 2,000 shares of \$5 each.

Directors :

Francis F. Emery, Boston, Mass.,		H. B. Prince, Mt. Uniacke, N.S.
Eugene D. Brooks, Boston,	|	T. R. Prince, do
W. R. McSweeney, Halifax,		

Head Office : Mount Uniacke, Hants County, N.S.

Formed to acquire and work gold and other mineral areas in the Province of Nova Scotia.

PIKE LAKE MICA MINING CO.

W. A. Allan, Ottawa,	|	D. Geo. MacMartin, Perth, Ont.
----------------------	--	--------------------------------

Head Office : Victoria Chambers, Wellington Street, Ottawa, Ont.

Formed to acquire, work, and further develop a mica property, situate Lots 16 and 17, in the 9th Range, Township of North Burgess, County of Lanark, Province of Ontario. The property has been worked for some years, good quantities of white and amber mica having been extracted and shipped to the United States.

Superintendent : D. George MacMartin, Stanleyville, Ont.

PLEASANT RIVER GOLD MINING CO.

Capital, \$5,000, divided into 500 shares of a value of \$10.00 each.

Directors :

John Hines, Managing Director.		
Wm. M. Duff,	|	Douglas Lantz,
Enos. Ernest,		B. H. Porter.

Head Office : John Hines, Managing Director, Bridgewater, N.S.

This Company holds under lease from the Provincial Government 90 gold areas in the Pleasant River District, County of Lunenburg, Nova Scotia; mines equipped with 10 stamp-mill, two engines and boilers, rock-breaker, and other necessary equipments. Not in operation in 1889 and 1890.

PORTLAND PHOSPHATE MINING CO.

W. A. Allan, Ottawa, Ont.,	|	S. H. Fleming, Ottawa, Ont.
----------------------------	--	-----------------------------

Head Office : Victoria Chambers, Wellington Street, Ottawa, Ont.

This is a private Company, owning and operating phosphate lands in the Township of Portland, Ottawa County, Province of Quebec. Preliminary work was commenced in the summer of 1890 on Lots 26, 27, 28, 29, 30 and 31, in the 4th Range of the Township of Portland aforesaid. A small force employed.

Superintendent : John H. Haycock, Lucerne P.O., Que.

PREMIER OIL CO.

Incorporated 1890. Capital Stock \$150,000, divided into 1,500 shares of \$100 each, of which, to 1st September, 1890, \$91,000 had been subscribed and paid up.

Directors :

	Wm. Brough, Toledo, Ohio,	
S. Cunningham, Washington,		Robert Reid, Montreal,
R. Kemp Thomas, Montreal,		Robert E. Menzie, Montreal.

Head Office : Seymour Cunningham, Secretary, Petrolia, Ont.

Formed to manufacture, buy, sell and deal in oil producers and oil refiners supplies; to sink for natural gas, and to lay down and maintain pipe lines for the transportation of such gas; to put down and work pipe lines for carrying petroleum, etc., etc. The Company purchased in June, 1890, the property and plant formerly owned and operated by the Producer's Oil Company, of Petrolia. Estimated value of machinery plant \$80,000. Forty men and boys employed.

General Manager : R. E. Menzie, Petrolia, Ont.

PRODUCER'S TANKING CO.

Incorporated 1884. Capital Stock \$50,000, divided into 500 shares of \$100 each, of which to date, \$25,328.63, has been subscribed and paid up.

Directors :

	W. H. Hammond, <i>President.</i>	
John Kerr,		D. Trotter,
J. H. Fairbank,		Robt. Morris,
Jas. McCort,		A. T. Gurd,
	William Lindsay.	

Head Office : W. H. Hammond, Secretary, Petrolia, Ont.

This Company owns and operates some fourteen oil wells at Petrolia, in the Province of Ontario; average depth of each 470 feet; capacity about 7 bbls. per day; average yearly production about 2,000 bbls. The Company also carries on the business of storers for the other producers; capacity of tanks about 82,000 bbls. It also owns a pipe line extending for a distance of five miles around the corporation. Machinery plant includes Northey, McKee and Marwick pumps, engine and boiler, etc. Six men and boys employed.

QUEEN'S COUNTY MINING CO.

Incorporated August, 1890. Authorized capital, \$1,000,000, divided into 20,000 shares of a value of \$50.00 each.

Directors :

	Gilbert Parker, Pres.,	
R. D. Evans,		E. L. Sanborn,
C. A. Coffin,		Albert Stone,
J. A. Badlit,		A. Edom.

Head Office : E. B. Eustin, Secretary, 64 Sennerst Street, Boston, Mass.

QUEEN'S CO. M. CO—Continued.

Formed to acquire and work 28 gold areas, held under lease from the Government of Nova Scotia, and situate at Whiteburn, in Queen's County, Province of Nova Scotia.

QUESNELLE QUARTZ MINING CO. (Ltd).

Incorporated 20th August, 1878. Authorized capital, \$600,000, divided into 600,000 shares of a value of \$1.00 each.

Directors :

Benedict Gillis,
John Girod,
W. A. Johnston,

Hon. James Reid,

George Elmore,
Robert Pacey,
James Stone.

Head Office : W. A. Johnston, Secretary, Quesnelle, B.C.

This Company owns 103 acres of mineral land, situate on Hixon Creek, in the Cariboo District, in the Province of British Columbia. A good deal of preliminary work has been done on the claim, but further operations were suspended during 1890. Estimated value of plant, \$17,485.00.

RAWDON ANTIMONY MINING CO. (Ltd.)

Incorporated 1890. Capital Stock \$50,000, in 5,000 shares of a value of \$10 each.

Directors :

B. F. Pearson, Halifax, N.S.,

Robert McNaughton, Truro, N.S.,

Charles Annand, Halifax, N.S.

Head Office : Halifax, N S.

Formed for the purpose of acquiring, holding, working, leasing, selling and conveying, any mines in the Province of Nova Scotia, and any mining rights or licenses, prospecting or otherwise, in, upon, or over any portion of said Province.

RED DEER VALLEY RAILWAY & COAL CO.

Incorporated 20th March, 1889. Authorized Capital \$1,000,000.

Directors :

Daniel Macfarlane, Toronto,
Joshua T. Johnston, Toronto,

Joseph Ick Evans, Toronto, Ont.,

Henry P. Withers, Toronto,
John Blain, Toronto.

Head Office : Toronto, Ont.

Formed to lay out, construct and operate, a railway of the gauge of 4 feet 8½ inches, from a point near the town of Calgary, in the District of Alberta, in the

RED DEER VALLEY R. & C. CO.—Continued.

North-West Territories, running generally, in a northeasterly direction, to a point on the Red Deer River in township 32, Range 21, west of the 4th principal meridian, and passing through townships 24 in the 29th Range, 25 in the 28th Range, 25 in the 27th Range, 26 in the 26th and 35th Ranges, 27 and 28 in the 24th Range, 29 and 30 in the 23rd Range, 30, 31 and 32 in the 22nd Range, west of the 4th principal meridian; and also, from, at, or near Cheadle station, on the C. P. R., in a northerly direction to a point of junction with the line from Calgary, in, or near township 26, Range 25, west of the 4th principal meridian; and also a branch or spur from a point on the main line in township 24, Range 29 west of the 4th principal meridian, to a point between Sheppard and Calgary stations on the C. P. R.; and also a branch from a point on the main line in township 30, Range 23, west of the 4th principal meridian, running in an easterly direction to the Red Deer River; with liberty to the Company to vary its line a distance of five miles on either side of the course above indicated; also to lease, buy, sell and mortgage, coal and other minerals, etc.

REVELSTOKE MINING CO. (Ltd).

Incorporated 23rd December, 1889, Authorized Capital £40,000, divided into 4,000 shares of a value of £10 each. Number of shareholders at last return, 7.

Directors :

A. W. N. Stuart,

Samuel Jordan,
Walter Ecott,
H. D. B. Porter,Herbert Gibson,
Wm. Bailey,
Daniel Chater.

Head Office : 80 Lombard Street, London, E.C.

Canadian Office : F. Storer Brown, Secretary, 11 Notre Dame St., Winnipeg

The Company owns and operates the "United," and No. 1 silver-lead mines, two miles from Hot Springs, or Ainsworth, in the Kootenay district, British Columbia. Twenty men employed.

Superintendent : J. Campbell, Revelstoke, B.C.

ROSSIGNOL MINING CO.

Organized August, 1890. Authorized Capital \$500,000, divided into 20,000 shares of a value of \$25 each.

Directors :

Gilbert Parker,

R. D. Evans,

E. B. Eustin.

Head Office : E. B. Eustin, Secretary, 64 Sennet St., Boston.

Formed to acquire and work 80 gold areas held under lease from the Government of Nova Scotia, and situate at Whiteburn, in Queen's County, Province of Nova Scotia.

SASKATCHEWAN RAILWAY & MINING CO.

Incorporated 16th April, 1889. Authorized Capital \$1,000,000.

Directors :

	John W. Cheeseworth,	
J. H. C. Willoughby,	|	J. E. Scheller,
G. N. Grant,	|	A. H. Royce,
B. W. Clark,	|	George E. Kidd,
Archibald Young,	|	F. R. Powell.

Head Office : Toronto, Ont.

Formed to lay out, construct and operate a standard guage line of railway from a point at or near Dunmore Station, on the Canadian Pacific Railway, thence northerly to a crossing of the South Saskatchewan River, at or near Drowning Ford, thence across the Red Deer River near its mouth, thence by the best route to a crossing of the South Saskatchewan River, at or near Saskatoon, etc. ; also to buy and sell coal, iron, and other mines and coal lands in connection with their business.

SCOTTISH CANADIAN ASBESTOS CO.

Head Office : Nathaniel Spens, 219 Winchester House, London, E. C., Eng.

Company in liquidation. Liquidators : Messrs. Hanson Bros., Accountants, Standard Building, Montreal.

SEBASTOPOL PHOSPHATE SYNDICATE (Ltd).

Registered 1st September, 1890. Authorized Capital £5,000, in shares of £1 each.

The first subscribers are : G. J. Wells, of Chester ; G. C. Lomer, 4 Fen-church Avenue, London, E. C., and five others each taking one share.

Canadian Office : Messrs. Lomer, Rohr & Co., Custom House Square, Montreal.

SELKIRK MINING & SMELTING CO. (Ltd)

Incorporated 4th May, 1887. Authorized Capital, \$250,000, divided into 2,500 shares of \$100 each.

Directors :

Thos. Earle, M.P.,	|	F. S. Barnard,
W. J. Goepel,	|	Rev. A. Beaulands,
	|	E. Marvin.

Head Office : G. A. Sargison, 48 Langley Street, Victoria, B. C.

This Company owns and operates three mining locations, each 600 x 1,500 ft. at Illecillewaet, in the Kootenai District, Province of British Columbia. The principal of these, the Lanark, has a shaft sunk to a depth of 120 feet, and a tunnel run in for a distance of over 100 feet. Good shipments of ore were made three years ago, with a stated profit of \$65 per ton. This mine is at present being worked under the contract system, an average force of 10 men being employed. The total quantity of ore raised during the year 1889, as per returns received from the secretary of the Company, were 1,130 tons. The net value per returns and estimated value of ore on dump at 1st October, 1890, was \$50,371.

SHEBANDOWAN MINING CO.

Incorporated under the "Ontario Joint Stock Companies' Letters Patent Act," 25th
March, 1875. Capital, \$1,000,000, in 100,000 shares
of 10.00 each, fully paid up.

Directors:

J. J. Vickers, Toronto, President,
Walter McDermott, New York, | M. L. Sibley, Detroit,
Nicol Kingsmill, Toronto, Sec.-treasurer.

Head Office : Toronto, Ont.

The property owned by this company consists of mineral locations: A1, containing 228 acres ; A2, 320 acres ; A3, 302 acres ; A4 and A5, 462 acres ; A6, 379 acres ; A7, 300 acres ; 26 B, 180 acres ; 27 B, 323 acres ; 28 and 25 B, 404 acres ; 29 B, 321 acres ; 30 B, 320 acres ; 31 B, 320 acres ; 32 B, 320 acres ; 33 B, 160 acres ; 34 B, 160 acres ; 4 H, 160 acres ; 5 H, 320 acres ; 6 H, 160 acres ; 7 H, 320 acres ; 8 H, 320 acres ; 9 H, 80 acres ; containing in all 5,859 acres, situate near Jack Fish Lake, in the Township of Moss, in the district of Thunder Bay, Ontario ; not in active operation 1890.

SHERBROOKE MARBLE CO.

Incorporated 5th January, 1886. Authorized Capital, \$100,000, divided into 2000
shares of \$50 each.

Directors:

G. B. Loomis, | Joseph Webster, | S. J. Foss,
Wm. White, | | H. Moe.

Head Office : Sherbrooke, Que.

Formed to open and work quarries of marble, slate and other economic minerals
and mineral substances, and to manufacture, sell and export the same.

SHUNIAH WEACHU MINE CO. (Ltd).

Registered 17th November, 1886. Authorized Capital £100,000, in shares of £1
each, of which £99,888 has been issued and fully paid ; 25,000 fully paid shares
were allotted to the vendor in part payment for the property ; 9,000 fully paid
shares were allotted to the directors in lieu of remuneration for two years ; and to
other parties for services rendered in connection with the formation of the Com-
pany, and the remaining 66,000 shares were offered for subscription in November,
1886. The consideration for the property was £55,000, payable £30,000 in
cash and £25,000 in fully paid shares. Accounts made up annually to 30th
November.

Directors :

Jas. Aspinall Tobin, *Chairman.*
Sir Alexander Galt, | Frank Tobin,
John W. Maclure, M.P., | Robert Ashburn Edgar.

**Head Office : V. Kimball Fry, Secretary, 5 C., Queen Insurance Buildings,
Liverpool, E.C.**

SHUNIAH W. M. CO.—Continued.

Formed to acquire, work, and further develop about 240 acres of mineral land, consisting of two mining locations on the Silver Mountain, near Port Arthur, and other mineral lands in the Province of Ontario. At 1st September, 1890, 51 men and boys were employed. Two shafts, No. 3 and No. 4, in operation; depth of No. 3, 692 feet; No. 4, 450 feet. Underground workings: Drifts, 3,550 feet; 9 winzes, 450 feet; 8 slopes. Value of ore shipped to 1st September, \$30,000. The milling ore on dump at that date was estimated to be of a value of \$45,000.

Mine Manager : S. R. Thompson, Port Arthur, Ont.

SILVER CENTRE MINING CO. OF ONTARIO (Ltd).

Incorporated 20th June, 1890. Nominal Capital Stock \$300,000, in shares of \$10 each. Of the \$300,000 Capital Stock, \$200,000 have been allotted to the owners of the said mining location R 64 in consideration of conveyance of same to the Company. The remaining \$100,000 of the capital stock has been reserved for purposes of development, and of which the directors desire at present to dispose of sufficient to enable them to raise a sum of \$10,000, which they consider will suffice for purpose of immediate and preliminary development.

Incorporators :

S. C. Duncan Clarke,
Robt. McLain,
A. A. Howland,
John Flett,
Henry Lowndes,

Lt.-Col. G. A. Shaw,
R. Caddick,
George Dunstoun,
Thos. Claxton,
S. J. Dawson, M.P.

Head Office : W. H. Hunter, Secretary, 37 Richmond St., Toronto.

Formed to acquire, work, and further develop mineral lands in the Province of Ontario, more particularly mining location R 64, in the Township of Lybster, in the District of Thunder Bay.

The property consists of 160 acres freehold, situated in the Silver Mountain region of Thunder Bay district, and is within 40 miles of Port Arthur, the head of navigation on Lake Superior.

It is within about a mile of the line of the Port Arthur, Duluth & Western Railway, which is in course of construction from Port Arthur westward, and will soon be completed as far as Silver Mountain. It is well watered and contains an abundance of timber suitable for mining operations. The government waggon road passes through the location.

It may further be stated that the property is held by Patent direct from the Crown, and that there are in Ontario no government dues, taxes or royalties whatever on mines or the produce of mines.

SILVER GLANCE CO. (Ltd).

Incorporated 1890. Capital £60,000, in £1 shares.

Directors :

Ed. Maurin, London, Eng.,
E. Schubertin, London, Eng., | M. de St. Giniez, London, Eng.

Head Office : 139 Cannon Street, London, E.C., England.

SILVER GLANCE CO.—Continued.

Formed to acquire and work mineral lands near Port Arthur, in the Province of Ontario. The property owned consists of 80 acres, and is known as the Silver Glance location, and is situate about $3\frac{1}{2}$ miles north-west of White Fish Lake in the Silver Mountain district, and at a point $1\frac{1}{2}$ miles north of the line of the P. A. D. & W. Ry. The operations to date have been purely of a preliminary nature, the company not being fully organized at 1st September, 1890.

Canadian Representative: Walpole Roland, M.E., Port Arthur, Ont.

SILVER STAR MINING CO.

A private Company.

Owners:

	Hon. Peter McLaren, Perth, Ont.,
W. A. Allan, Ottawa,	Edward Watts, Perth, Ont.

Head Office: Victoria Chambers, Wellington Street, Ottawa, Ont.

Formed to acquire and work the property known as location R367, situate at a point three miles west of White Fish Lake, in the mining district of Thunder Bay, Province of Ontario. The workings are within half a mile distance from the line of the P. A. D. & W. Ry. A small force at work in 1890.

Superintendent: Edward Watts, Perth, Ont.

SILVER WOLVERINE (Ltd).

Registered 19th October, 1888. Authorized Capital, £100,000, in £1 shares, of which £66,695 has been issued and fully paid. 30,000 shares were offered for subscription in October, 1888. The sum of 2s. 6d. was payable on application, 7s 6d. on allotment, and the balance in two calls of 5s. each at two and four months from date of allotment. Letters of allotment issued on 2nd November, 1888.

Directors:

Major the Hon. Horace Miles Hobart-Hampton.	
Major Gen. W. H. O. Swanston,	Major J. A. Winter,
J. M. Davidson,	Septimus Hedges.

Head Office: W. E. Pearce, Secretary, 145 Cannon Street, London, E.C.

Formed to acquire and work the Wolverine silver mine, containing 80 acres of mineral land, near White Fish Lake, in the district of Thunder Bay, Ontario. Annual meeting in March. Machinery plant includes Doty hoisting engine and boiler, Cameron pumps, etc., etc. Depth of shaft, 150 feet.

Mine Superintendent: Capt. J. Gilbert, Port Arthur, Ont.

SOUTH FORK HYDRAULIC MINING CO. (Ltd.)

A private company consisting of the following :

Shareholders :

John K. Barker,
G. A. Veith,
W. Stephenson,

Thomas Barton,
W. Polleys,
A. Burrell.

Head Office : Wm. Stephenson, Secretary, Quesnelle Forks, B.C.

Formed to operate alluvial ground, situate between the present South Fork of Quesnelle, in the Cariboo district, Province of British Columbia ; in 1890, a small force was employed doing preliminary work prior to mining proper.

SOUTH FORK OF QUESNELLE HYDRAULIC MINING CO.

A private Company, consisting of the following :

Shareholders :

John K. Barker,	Wm. Stephenson,	Thomas Barton,
G. A. Veith,	A. Burrell.	W. Polleys,

Head Office : J. K. Barker, Superintendent, Forks Quesnelle, Cariboo, B.C.

This Company holds under lease from the Crown for a period of ten years a hill claim, in extent $\frac{1}{2}$ mile x 1,000 feet, and situate on the South Fork Quesnelle, in the district of Cariboo, Province of British Columbia. Six men employed.

STANDARD ASBESTOS CO. (Ltd.)

Incorporated October, 1890. Authorized Capital, \$100,000, divided into 100 shares of \$100 each.

Directors :

Hon. J. E. Campbell, Hamilton, Ohio.,	D. Ufford Jennings, New York.
F. J. Falding, Sherbrooke, Que.,	R. H. Martin, Brooklyn, N.Y.

Head Office : D. U. Jennings, Secretary, 45 Broadway, N.Y.

Formed to acquire by purchase, lease, location or otherwise, and hold asbestos and other mineral lands, locations, mining rights, limits or any interest therein, or lands supposed to contain minerals or any interest therein ; to sell, lease or otherwise dispose of the same ; to explore, mine, work or otherwise develop the resources of such lands, or other lands, whether belonging to the company or not ; to crush, smelt, and reduce and amalgamate the minerals, and otherwise render marketable the product, and sell and transport the same, to construct, purchase, lease or otherwise acquire, and hold and operate all buildings, machinery, plant, barges, vessels, boats, trawls, roads, docks and other buildings, and works which the company may deem suitable or necessary for such operations. The property acquired contains 200 acres, and is situate in the Township of Elziver, in the County of Hastings, in the Province of Ontario. Operations had not been begun at 1st November, 1890.

STANLEY COAL CO.

A private Company, consisting of the following :—

Owners :

James S. Hickman, Amherst, N.S.,	|	Wm. A. Fillmore, J.P., Amherst, N.S.
J. L. Fillmore, Amherst, N.S.,	|	E. N. Sharp, Amherst, N.S.

Head Office : E. N. Sharp, Amherst, N.S.

This Company holds some fifteen square miles of coal areas under license, at Stanley, Cumberland County, in the Province of Nova Scotia. The seams are (in descending order, 9 feet ; 6 feet ; 3 feet 6 inches ; 5 feet 4 inches ; and 2 feet 8 inches thick. Prospecting only done to date.

STANLEY GOLD MINING CO. (Ltd.)

Incorporated 23rd August, 1890. Capital Stock \$40,000, in 400 shares of \$100 each, of which, to 1st September, 1890, 200 shares of a value of \$20,000 had been subscribed and paid up as follows :—

John Bryson, of Fort Coulonge.....	70	shares
John McDougald, of Westville, N.S.....	80	"
Duncan McGregor, of Westville, N.S.....	15	"
James W. Bryson, of Fort Coulonge.....	20	"
Robert Maxwell, of Westville, N.S.....	5	"
Duncan McCuaig, of Fifteen Mile Stream.....	10	"

Directors:

John Bryson, M.P., Fort Coulonge, Que.,
John McDougald, M.P., Westville, N.S. | Duncan McGregor, Westville, N.S.

Head Office : Westville, Pictou Co., N.S.

Objects : (a). Acquiring, holding, working, mining, leasing, selling and conveying any mines, or natural deposits of gold, or gold-bearing rock, ore or earth at Fifteen Mile Stream Gold District, and elsewhere in Nova Scotia, and any gold mining rights or licenses prospecting or otherwise, in, upon, or over, any portion of said Province.

(b). Prospecting and searching for, mining, removing from the earth and carry ing away gold or gold-bearing rock, ore or earth, in any such districts ; and possess- ing, owning or selling the same.

(c). Washing, sifting, crushing, amalgamating, smelting, or otherwise dealing with for the purpose of obtaining gold, any gold bearing rock, ore or earth.

(d). Erecting, constructing, acquiring, holding, maintaining, operating, selling and disposing of such machinery, plant, appliances, buildings, ways, dams, water courses and water-flumes as may be necessary or incidental to the purposes aforesaid, or the company's business.

(e). Acquiring, holding, selling, dealing in, conveying and otherwise disposing of all kinds of real and personal property for the purposes or business of the company, or incidental thereto.

The Company holds, and is at present operating, 100 gold areas, under lease from the Government of Nova Scotia, situate at Fifteen Mile Stream, in the County of Halifax, N.S. Twenty-five men employed ; 10 stamp-mill (water power) ; steam hoisting and pumping gear.

Mine Superintendent : George Herschfield, Fifteen Mile Stream, Halifax Co., N.S.

STEADMAN QUARTZ MINING CO. (Ltd.)

Incorporated 16th December, 1886. Authorized Capital \$200,000, divided into 200,000 shares of a value of \$1 each.

Directors :

Joseph Huot,	Hon. James Reid.	Joseph Mason,
W. A. Johnstone,	|	P. C. Dunlevy.

Head Office : W. A. Johnstone, Secretary, Quesnelle, B.C.

Formed to acquire and work lodes or veins of gold and other minerals in the Province of British Columbia. Company owns a mineral claim 1,500 by 600 feet in extent. No work done in 1890, pending negotiations with an English syndicate to whom it has been bonded.

STEEL CO. OF CANADA (Ltd.)

Now being wound up. Liquidators : W. Duffus, Halifax, N.S. ; A. T. Paterson, Montreal, Que. ; G. Jaune, Londonderry, N.S., and A. S. McClelland, 115 St. Vincent Street, Glasgow.

SUGAR CREEK HYDRAULIC MINING CO. (Ltd.)

Incorporated 20th April, 1885. Authorized Capital, \$50,000, divided into 50,000 shares of \$1 each.

Directors :

P. C. Dunlevy,	Wm. Pinchbeck,	Gomer Johns,
R. Buchannan,	|	J. B. Nason.

Head Office : Barkerville, B.C.

Formed to mine gravel and quartz in the Province of British Columbia, and particularly certain placer claims on Sugar Creek, in the Cariboo district, of the Province aforesaid. The Company has since been dissolved, and its property is now operated by the Toronto Mining Company, of Sugar Creek.

TEMPLETON & NORTH OTTAWA MINING CO. (Limited.)

Registered 14th June, 1888. Authorized Capital, £50,000, in shares of £10 each

Directors :

George Moffatt,	J. Blackwood Greenshields,	Wm. Smith,
J. J. Greenshields,	|	Jas. A. Gillespie,
A. T. Paterson,	|	E. S. Clouston.

Head Office : Messrs. Wm. Smith & Co., 10 Corn Street, Bristol, Eng.

TEMPLETON & N. O. M. CO.—Continued.

Formed for the purpose of adopting an agreement between Wm. Smith & Co., of the first part, the Bank of Montreal of the third part, and the Templeton and North Ottawa Mining Company of the fourth part; for the purpose of acquiring phosphate lands in the Templeton district, Ottawa County, in the Province of Quebec, in all 3,748 acres in extent. The consideration for the property was £25,000, in fully paid shares. In 1886, steam machinery was introduced at the "Sheppard Pit," Lot 8, in 10th Range, and mining carried on for about 16 months. During that period, 574 tons of phosphate were raised, a large proportion of which showed high test, but the want of more efficient management being felt, and the proprietors being engaged in other lines of business, which prevented their personal attention to the work, it was deemed advisable to suspend operations.

CANADIAN OFFICE :

A. T. Paterson, St. Francois Xavier St., Montreal, Que.

TEMPLETON PHOSPHATE RAILWAY CO.

Incorporated 1889. Authorized capital, \$50,000, divided into 1,000 shares of a value of \$50 each.

Directors :

Hon. A. W. Ogilvie, Montreal, Que.,	
R. Prefontaine, M.P., Montreal,	Arthur Gagnon, Montreal,
A. B. Chaffee, do.	Hugh McMillan, M.P., Rigaud,
Geo. G. Foster, do.	L. N. Champagne, Hull, Que.,
A. Lemieux, Quebec,	R. H. Martin, New York.

Head Office : Arthur Gagnon, Secretary, 30 St. Francois Xavier Street, Montreal.

Formed to construct a line of railway, having its starting point from the Ottawa River, in the Province of Quebec, at or near the Village of East Templeton, in the County of Ottawa, running in a northerly direction as far as the Gore of said Township to a distance of about fifteen miles, and also to build a line of railway, starting at a point on the herein above mentioned railway, at the eighth or tenth Range of said Township of Templeton, near Perkins' Mills, and running in a westerly direction to a point in the Township of Wakefield, a distance of about fifteen miles.

TEXADA GOLD & SILVER MINING CO.**Directors :**

George W. Stirton, <i>President</i> , Nanaimo, B.C.	
Alfred Raper, Nanaimo, B.C.	E. A. Praeger, M.D., Nanaimo, B.C.
Elijah Priest, C.E., Nanaimo, B.C.	

Head Office : Alfred Raper, Secretary, Box 21, Nanaimo, B.C.

This Company's property consists of 180 acres of land, on Texada Island, B.C. The property adjoins the well known Puget Sound iron mine, and contains veins of silver, copper, gold and other ores. Limestone and black marble of a superior quality is also found thereon. The property was being opened up at 1st October, 1890, a small force being employed.

Mine Superintendent : Elijah Priest, C.E., Texada Island, B.C.

THE ACADIA COAL CO. (Ltd).

Authorized Capital, \$4,000,000, unassessable.

Directors :

J. W. Clendinnen, <i>President</i> , 1 Broadway, New York.	
C. W. Field, New York,	H. M. Allan, Montreal,
H. M. Field, do	Sir James Anderson, London,
C. B. Hoffman, do	Sir George Elliott do
C. Livingstone, do	J. C. Parkinson, do

Head Office : Stellarton, N. S.

Formed to acquire, work and further develop coal areas in the County of Pictou, in the Province of Nova Scotia. The production of coal from the collieries operated by the Company during the year 1889 amounted to 269,607 tons. The sales were :—

To Nova Scotia	175,274 tons.
“ Prince Edward Island.....	23,541 “
“ Quebec.....	13,594 “
“ New Brunswick.....	16,371 “
“ Newfoundland.....	52 “
“ United States.....	784 “
“ Colliery employees.....	5,730 “
Total sales.....	235,346 “

The workmen employed at the mines and works during that period included 787 men ; boys, 126 ; or a total of 913 persons.

Acadia Colliery, at Westville, 3 miles from Stellarton. *Mine Manager* : James Maxwell.

Seam of 10 ft. worked ; dip averages 27 deg. ; slope, 3,600 ft. ; extreme vertical depth, 1,500 ft.

System of working : in lifts of 400 ft., counterbalance planes every 400 ft., with few primary narrow bords, driven inbye, followed by prompt pillar working outbye from boundaries.

Ventilation by fan, 24 ft. by 8 ft., iron casing ; engine 20 in. by 20 in. cut-off ; 17" water-gauge, barometer, etc. : Liveing's gas indicator.

Lamps—Mueseler and Marsaut.

Hoisting engine on slope, pair 16 in. cyl., 32"-60" stroke direct ; drum, 14 ft.

Pumping—Duplex compound condensing 22 x 11 in. x 24 in., rams 5.5 in. ; column length, 2400 ft., vertical head, 990 ft., wrought pipe, tarred, 6 in. upset ends vanishing threads, metal flanges, no leaks ; steam pressure on top 105 lbs., pipe 4 in. covered with infusorial earth from a local deposit ; air feeder added to air chamber ; auxiliary duplex compound condensing 14" x 8" x 16" at bottom of pit ;

Boilers—Water tube ; fuel, culm ; grates, perforated plates, and Howe's raker with steam jet in ashpit.

Screens, double—Primary, 6 in. ; secondary, 3/4 in, apart curved ; 5 sizes of coal ; elevator, revolving and shaking screens ; Clarke's jig.

A specimen of coal from this colliery gave :—

Hygroscopic water.....	2'10
Volatile combustile matter.....	32'27
Fixed Carbon.....	57'57
Ash.....	7'56
Sulphur.....	0.50

THE ACADIA C. CO.—Continued.

Albion Colliery, at Stellarton, on I. C. R.; Railway second built in America; locomotives include "Samson," built in 1838, and exhibited at Chicago exhibition; main seam, 3 ft. thick; 148 ft. lower, deep seam, 22 ft. thick; Foord pits, vertical, 900 ft. deep; sunk to main seam; scene of explosion in 1880; loss of life, 44; workings now free of water; machinery massive; hoisting engine, 38" cyls., 5 ft. stroke, 18 ft. dia. drum; Cornish pumps, 62 in. cyl., 9 ft. stroke; beam 34 ft. long, 7 ft. deep in the middle; weight, 18 tons; working barrel, 18" dia.

Air-compressors in course of erection at time of explosion, and now not in use; steam cyls., 36" dia., do., 40"; stroke, 6 ft.; flywheel, 22 ft. dia., weight 20 tons; present workings in lower seams; capacity 1,000 tons per diem; ventilation by furnace and fans; the latter 30 ft. dia. by 10 ft. wide; lamps. Mueseler; coal used for coking purposes; 104 ovens; bee-hive 10 ft. dia.; average pitch of seam, 22 degrees. The following analyses of the coal are by Professor How, of Windsor College, Nova Scotia:—

Main seam:

Hygroscopic water.....	1.48
Volatile combustible matter.....	24.28
Fixed carbon.....	66.50
Ash.....	7.74

Deep seam:

Hygroscopic water.....	2.54
Volatile combustible matter.....	20.46
Fixed carbon.....	68.50
Ash.....	8.50

This coal cokes well, and is largely used both for house and steam purposes.

Vale Mine, 6 m. E. of New Glasgow, works two seams; McBean, by slope 3,100 ft. long; dips 14° to 35°; vertical depth, 1,600 ft.; not working in 1890.

Six foot seam; slope 1,900 feet; outcrop for 500 left unworked; a new winning ventilated by compression fan, 16 ft. by 6 ft.; engine 10 in. by 16 in. An analysis of a specimen coal from this seam gave:—

Hygroscopic water.....	2.22
Volatile combustible matter.....	30.23
Fixed carbon.....	59.70
Ash (white).....	7.85

General Manager: Henry S. Poole, Stellarton, N.S.

Assistant General Manager: J. Geo. Rutherford, Stellarton, N.S.

THE ALABASTINE CO. (Ltd')

Incorporated 1885. Authorized Capital, \$50,000, in shares of \$100 each, of which, to date, \$28,000 have been subscribed and paid up.

Directors:

David Brown, Paris, Ont.,	Thos. McCosh, Paris, Ont.,
W. B. Church, Grand Rapids, Mich.,	M. Giles, " "
Alex. S. Gill, Paris, Ont.,	J. Brown, " "

Head Office: Thomas McCosh, Secretary, Paris, Ont.

This Company owns some 65 acres in North Cayugo, in the County of Haldimand, and 100 acres near Paris, all in the Province of Ontario. The production of gypsum from the Company's quarries for the year 1889 amounted to 2,000 tons; 15 men employed. The Company also operates works at Paris for the manufacture of alabastine.

THE ALGOMA MINES CO.

Incorporated Jan. 1886, under the laws of the State of Michigan. Authorised Capital, \$100,000, divided into 4,000 shares, of a value of \$25 each.

Directors :

S. L. Ballentine, <i>President</i> ,		
George R. Wallace,	|	A. R. Ballentine,
F. C. Farrand,	|	W. L. Jenks,
S. L. Ballentine,	|	J. H. Talbot.

Head Office : J. H. Talbot, Secretary, Port Huron, Mich.

This Company controls some 400 acres of mineral land in the Township of McTavish, near Black Bay, Lake Superior, in the Province of Ontario. Main shaft, 160' deep; drifts 100'. Mining work was not done in 1890, but operations on an extensive scale will be commenced in the spring of 1891.

THE ALICE & EMMA CONSOLIDATED GOLD QUARTZ MINING CO.

Incorporated 2nd November, 1887. Authorized Capital, \$300,000, divided into 150,000 shares, of a value of \$2 each.

Directors :

Morris Ross,	|	Jas. McB. Smith,
John Grant,	|	T. S. Milligan,
E. Crow Baker.		

Head Office : James McB. Smith, Secretary, Victoria, B.C.

Formed to purchase the Alice and Emma mineral claims on the Main Lode at or near Rock Creek, in the Osoyoos Division of the District of Yale, in the Province of British Columbia, from the Registered owners thereof, for 80,000 paid-up shares of the Capital Stock of the Company, to be called *Issue A*, and \$700 in cash to be paid out of the proceeds of the sale of the first allotment of stock. Also to mine and work the said mineral claims for the precious metals contained therein, etc. The following is an extract from the Report of the Directors, presented at the General Meeting of Shareholders held 11th January, 1889 :—

In November, 1887, the Board authorized the sinking of a shaft to the depth of 50 feet, and appointed Messrs. Henry Nicholson and James Tallyard as joint managers of the works at Rock Creek. Mr. Nicholson was authorized to call for tenders for the sinking of the shaft, with instructions that it was not to exceed \$20 per foot. The Company purchased in Victoria tools, bellows, steel, taps and dies, cars, powder, and all the necessary equipments for the work, and forwarded them to Rock Creek by Mr. Nicholson. These supplies amounted to \$435, to which the cost of transport being added, made the outlay on the first supply of tools and powder \$600.

The contract was let to James Tallyard for the first 50 feet of shaft at \$20 per foot, and completed, but it was found that other outlay incident to the work—such as timbers, shaft and cook house—ran the expenses up much higher than the Board had at first anticipated. It was the intention of the Directors, if funds permitted, to continue the sinking of the shaft to the depth of 100 feet, or to sink two shafts

THE ALICE & E. C. G. Q. M. CO—Continued—.

of 50 feet each, in order to test the lead at different places, but, after continuing the first shaft to the depth of some 67 feet, they were compelled to order the work to be stopped on account of the lack of funds. The total expenditure, as shown by the accounts, amounts to \$3,956.

The estimated value of the Company's property at that date was as follows:—

The property of the mine consists of one dwelling house and contents.....	\$ 400 00
One shaft and whim house.....	500 00
Tools, etc., including about 250 bushels Charcoal.....	600 00
Lumber.....	250 00
One electric battery.....	87 00

\$1,837 00

These claims were not in active operation during the years 1889-1890.

THE AMERICAN ASBESTOS CO.**Managing Director :**

Ed. Wertheim, Black Lake, Que.

A private Company formed in 1889, to acquire, work and further develop asbestos lands in Canada. In September, 1888, Mr. L. Wertheim, of Frankfort, Germany, purchased from Dr. James Reed, 100 acres in Range A, Coleraine, a few miles from Black Lake Station, on the Quebec Central Railway, the purchase consideration being \$40,000 cash. In 1889 an average number of 60 men and boys were employed. The production of asbestos was as follows:—

<i>Exported.</i>			<i>Mined.</i>				
No. I quality	51½	|	No. I quality.....	79¼	|		
II do	69		II do	82			
III do	259		III do	357			
Hornblende.....	2		Hornblende.....	12			
Tons shipped			381½	Tons mined.....			530¼

The mine is well equipped with suitable buildings and with Rand compressor, steam drills, hoisting gear, and all requisite plant, and is under superintendence of a well qualified German engineer.

THE ANGLO-AMERICAN MINING CO.

Incorporated 15th May, 1890. Capital Stock \$3,000,000, in shares of \$1 each, one-fourth of which shall be known as development shares.

Directors :

John A. Green,

Jas. Tallyard,

Joseph Johnson.

Head Office: Yale, B.C.

Formed to work auriferous ground on the Siwash Creek, Yale district, in the Province of British Columbia; to maintain, construct, purchase, hire, improve and manage, flumes, hydraulic works, crushing works, furnaces and other works which may be directly or indirectly conducive to the objects of the company, etc.

THE ANGLO-CANADIAN ASBESTOS CO.

Registered 1889. Authorized Capital £20,000, in shares of £1 each, of which £11,000 has been issued and paid. There are also debentures to the amount of £3,450. Accounts annually to 31st December.

Directors :

Chairman : W. H. Irwin, London.
W. Robinson, D. A. Stanley, R. T. Hopper, H. F. Watson.

Head Office : Messrs. Irwin, Hopper & Co., 30 St. Francois-Xavier St., Montreal.

Mine Superintendent : — Clerihew, Black Lake, Que.

Formed to carry out an agreement between the Anglo-Canadian Asbestos Company (in liquidation), and W. H. Irwin, to acquire, work and further develop the two freehold asbestos estates "Eureka" and "Emelie," in the Eastern Townships, Province of Quebec, containing in all about 325 acres. Purchase money £35,000, payable £30,900 in 15,450 shares of £2 and the balance in cash.

The total output from the mines of the Company at Black Lake for the year 1889, was 603 tons, of which about 500 tons were exported to the United States and the remainder to Great Britain. Eighty men employed.

THE ANTHRACITE & BITUMINOUS COAL CO. (Limited.)

Incorporated 9th September, 1889. Capital Stock, \$250,000, in 2,500 shares of \$100 each.

Directors :

B. E. Chaffey, Winnipeg, Man., *President*,
W. Hamilton Merritt, Toronto, Ont., | F. A. Fleming, Toronto, Ont.,
S. H. Fleming, Ottawa, Ont., | G. H. Harman, " "

Head Office : W. Hamilton Merritt, A.R.S.M., F.G.S., Managing Director, 15 Toronto St., Toronto, Ont.

Formed to acquire and work coal lands in the Dominion of Canada. The property owned consists of some 1,500 acres of land at Cochrane, in the Province of Alberta, N. W. T. A shaft to a depth of 500 feet has been sunk and some preliminary work done on a promising 7 ft. seam of coal; but work was suspended and had not been resumed at 1st September, 1890, pending some negotiations for the transfer of the property. About \$6,000 has been expended on plant and prospecting to date.

THE BADGER SILVER MINING CO.

Incorporated May, 1887. Capital Stock, \$250,000, in shares of \$5 each, fully subscribed and paid up to date.

Directors :

John M. Stowell, *President*, Milwaukee, Wis.,
Christian Preusser, | C. A. Read,
Walter Read, | Chas. Sammond.

Head Office : Walter Read, Secretary, N.E. Cor. E. Water and Mason Streets, Milwaukee.

THE BADGER S. M. CO.—Continued.

The property owned and operated by this successful Company consists of the "Badger" location, Lots 200 T, and 201 T, and also Lot 96 T, known as the "Porcupine," in all about 360 acres in extent, situated about 28 miles S. W. of the town of Port Arthur, in the district of Thunder Bay, in the Province of Ontario. Two dividends have been paid, amounting in all to \$37,500, the first on the 15th Jan., 1890, of 50 cents per share, or \$25,000; the other on the 5th March, 1890, of 25 cents per share, or \$12,500. The Company has mined and shipped to 4th August, 1890, as per official returns, ore and bullion of a value of \$250,000. Annual meeting held on the last Thursday of January of each year. About 125 men and boys employed. Plant: One stamp mill 28 x 92, three stories, with boiler and engine house 30 x 32; two steel tubular boilers 4 x 16; "Conway" automatic cut-off engine 14" x 20"; Blake crusher; Strauss "Atmospheric" stamp, of a capacity of 20 tons per diem; four frue-vanners. Average daily capacity of mill, 30 tons. In 1890, 5 veins on the Badger and Porcupine locations were being worked. Plant at No. 1: boiler and engine house, 24 x 36 feet; one 4 x 16 ft. tubular boiler; one 12 x 24 reversible engine, geared to 3½ ft. drum. At No. 2: one double cylinder, 8 h.p. friction drum hoist, supplied with steam from No. 1 plant, 350 feet distant. No. 3 (Porcupine): operated by adit and levels. No. 4 (original Porcupine): temporary plant, was in use August, 1880.

Mine Superintendent: Capt. Herbert Shear, Badger Mine, Murillo, Ont.

THE BATTYE FREESTONE CO. (Ltd).

Incorporated 1890. Authorized Capital Stock \$25,000, divided into 250 shares of a value of \$100 each.

Directors:

George Battye, Wallace, N.S.,
Ephraim Lombard, Boston Mass., | John Gillies, New York, N.Y.

Head Office: Wallace, Cumberland Co., N.S.

Formed to acquire and work stone quarries at Wallace and elsewhere in the Province of Nova Scotia.

**THE BEACONSFIELD COPPER MINING CO.
(Limited).**

Incorporated 15th May, 1878. Authorized Capital \$300,000, in 100,000 shares of a value of \$3.00 each.

Directors:

James Burns,
C. F. Houghton | Wm. D. Patterson, | John N. Richards.
Henry Warner, | Joshua Davies, | C. Marton.

This Company has since ceased to exist. Property sold for taxes

THE BEDFORD MINING CO.

Incorporated 3rd September, 1887. Nominal Capital Stock \$250,000, in 10,000 shares of \$25 each.

Directors :

<i>President</i> : Sir Richard Cartwright, Kingston, Ont.	
B. W. Folger,	M. J. Grady,
Alexander Dunn,	Joseph Bawdon,

Head Office : Joseph Bawdon, Secretary, Kingston, Ontario.

This Company was formed to acquire and work some 3,000 acres of mineral lands in the Township of Bedford, County of Frontenac, Ont., containing magnetic iron ores, red hematite ores, plumbago and phosphate of lime. At date no active operations were in force.

THE BLACK DIAMOND COAL CO. (Ltd.)

Incorporated 1887, under Letters Patent from Government of Nova Scotia. Capital \$100,000, in shares of \$100 each, of which, to date, \$60,000 has been subscribed and paid up.

Directors :

<i>President</i> : Hon. D. C. Fraser, New Glasgow, N.S.,	
Graham Fraser, New Glasgow, N.S.,	J. L. Jennison, New Glasgow, N.S.
Harvey Graham, do do	J. F. McKay, do do

Head Office : Harvey Graham, Managing Director and Secretary, New Glasgow, N.S.

Formed to acquire, work and further develop the property formerly owned by the Nova Scotia Coal Company, embracing an area of four square miles in the County of Pictou, in the Province of Nova Scotia. The quantity of coal mined during 1889, amounted to 34,015 tons, mainly sold to the I. C. Ry. and local consumers. An average number of 60 men and boys are employed. Depth of main slope, 1800 feet; aggregate workings, 2,400 feet. In October, 1887, a dividend of 10% was paid to the shareholders.

Mine Manager : J. W. Sutherland, Westville, Nova Scotia.

THE BLACK JACK QUARTZ MINING CO. (Ltd.)

Incorporated 18th March, 1890. Capital Stock, \$120,000, divided into 60,000 shares of \$2 each.

Directors :

<i>President</i> : E. A. Martin, Barkerville,	
John Stevenson, Barkerville, B.C.,	John Kauser, Barkerville, B.C.,
Charles Paulsen, Barkerville, B.C.,	J. St. Laurent, Quesnelle, B.C.

Head Office : W. H. Phelps, Secretary, Barkerville, B.C.

Formed for the purpose of mining quartz for precious metals and minerals in British Columbia; erecting or leasing mills and machinery for reducing ores; the acquisition of lodes or veins; and the obtaining of such water privileges and rights of

THE BLACK JACK Q. M. CO.—Continued.

way, and doing of such things as are conducive or incidental to the attainment of the above objects. The Company owns two locations, each 1,500 feet, near Barkerville. Ten men employed, 1890. In 1889 a shaft was sunk 42 feet deep, and a drift of 22 feet run on the ledge, when it was found that the ledge changed its course, which made it necessary to stope up an incline shaft to the surface, from which the ledge can be worked to better advantage. Crushing was commenced on 1st June, 1889, in the one stamp Kendall mill, and 202 tons were put through before the frost compelled them to close down. The ore averaged \$4.50 in free gold, and \$13 in sulphurets, per ton of rock crushed. To date, over \$5,000 has been expended in the preliminary operations of the Company.

Managing Director : E. A. Martin, Barkerville, B.C.

THE BLUE BELL MINING CO. (Ltd.)

Incorporated 30th July, 1889. Authorized Capital, \$50,000, divided into 10,000 shares of \$5 each.

Directors :

	Angus R. Johnston,	
Walter Wilson,	|	John M. Rudd.

Head Office : Nanaimo, B.C.

Formed to work gold and silver and other ores and minerals in the Province of British Columbia.

THE BOSTON MINING CO.

Incorporated under the laws of the State of Maine, U.S.A., 31st August, 1889.
Registered at the Department of Mines, Halifax, 25th October, 1889.
Nominal Capital Stock \$300,000 in shares of \$5 each.

Directors :

<i>President</i> : G. A. Kimball, Boston, Mass., U.S.A.,		
E. F. Whittemore, <i>Sec.-Treas.</i> , Boston,	|	F. K. Ballow, Boston, Mass., U.S.A.
Drias Wilson, Boston, Mass., U.S.A.,	|	Frank Leeds, do do

Head Office : Malaga, Queen's Co., N.S.

Formed to acquire and work 87 gold areas in the district of Malaga, Queen's County, Nova Scotia.

THE BRAS D'OR MARBLE CO. (Ltd.)

Incorporated under the "Nova Scotia Joint Stock Companies Act," 12th June, 1890.
Capital Stock \$200,000 in shares of \$10 each.

Directors :

<i>President</i> : C. F. Fraser, Halifax,		
Henry Saunders,	|	A. Milne Fraser, | Dugald Maclachlan.

Head Office : 161 Hollis Street, Halifax.

THE BRAS D'OR M. CO.—Continued.

Formed to acquire, work and further develop, marble deposits situated at Bras d'Or Lake, near West Bay, Cape Breton. The purchase consideration to the former owners was \$55,000 in cash and 8,000 shares in the present Company.

Quarrymaster : D. Maclachlan, Marble Mountain, Cape Breton.

**THE BRITISH & CANADIAN MICA & MINING CO.
(Limited.)**

Incorporated 24th May, 1886.

The mines and works are situate in the Township of Villeneuve, Ottawa County, Que. The property has, we understand, been transferred to Mr. S. P. Franchot, Buckingham, who is now sole owner.

Head Office : J. Keith Reid, Agent, Buckingham, Que.

**THE BRITISH COLUMBIA RIVERS GOLD DREDG-
ING CO. (Ltd.)**

Registered in London 23rd July, 1889. To purchase from Alexander Gibson the exclusive rights granted to him from the British Government to dredge for gold in 45 miles of the Fraser River, B.C.; and an exclusive license to use Ball's Patent Dredger in British Columbia; also to purchase and otherwise acquire mines and other properties in that Province. The Authorized Capital is £40,000, in shares of £1 each.

THE BROMPTON LAKE ASBESTOS CO.

Incorporated 1890. Capital, \$60,000, divided into 600 shares of \$100 each.

Directors :

E. B. Greenshields, Montreal,		E. J. Hale, Quebec,
Archibald H. Cook, Quebec,	|	G. H. Thomson, "
Andrew Thomson, "	|	

Head Office : A. H. Cook, Secretary, Quebec, Que.

Formed to acquire and work asbestos lands, in the Province of Quebec. The Company owns Lot 26 and half of Lot 25, in the 9th Range of Brompton, in all 377 acres, situate 8 miles from the line of the Grand Trunk Railway, and 13 miles north-west of the city of Sherbrooke, Que. The operations to date have been merely of a preliminary character; 30 men employed. The machinery plant was valued at 1st September, 1890, to be worth \$4,000.

Mine Superintendent : C. McCaw, Sherbrooke, Que.

THE CALABOGIE MINING CO. (Ltd.)

Incorporated 8th May, 1882. Capital \$2,500,000, in 100,000 shares of \$25.00 each, of which stock to the value of \$2,000,000 has been subscribed to date.

Directors :

J. G. Campbell, *President*,

Wm. Hicks, Perth, Ont.,	Edward Elliott, Perth, Ont.,
Peter McLaren, " "	J. F. Thompson, " "
Hugh Ryan, Toronto, " "	J. A. Allan, " "

Secretary : J. A. Allan, Perth, Ont.

This Company owns the east half of Lot 16, in 11th of Bagot; the west half of Lot 16 in the 9th; Lot 14 in the 7th; and the south half of Lot 16 in the 8th; in all 600 acres. Mining operations were commenced in September, 1882. The first shaft was put down 100 feet, at an angle of 30°; the width is from 8 to 20 feet. It was abandoned in 1883, but in 1886 was continued 108 feet further. A second shaft was opened in the same year to a depth of 30 feet, and mining was conducted in a good deposit of iron ore. In 1887, the property was operated, under lease, by the Kingston and Pembroke Iron Company. About 4,000 tons of ore have been mined and shipped, mainly to Cleveland, Ohio. Value of plant, about \$5,000. Operations have been suspended for three years, the Company claiming that the duty on their exports to the United States precluded successful operations.

THE CALEDONIA COAL & RAILWAY CO. (Ltd.)

Incorporated 1865. Capital Stock, \$600,000, divided into 6,000 shares of \$100 each.

Directors :

J. W. Emery, Portsmouth, N.H., <i>President</i> ,	
Gardiner G. Hubbard, Washington,	J. H. Converse, Cambridge, Mass.,
David McKeen, M.P., Glace Bay, C.B.	

Head Office : David McKeen, M.P., Manager, Glace Bay, N.S.

This Company holds some two square miles of coal areas, and is the owner of the Caledonia Colliery at Little Glace Bay, Cape Breton. Average thickness of seam mined, 7 feet. Vertical shaft, 185' from surface, with slope or travelling way. During the year 1890, from 350 to 400 persons were employed above and below ground. The total output of coal for the year ended 31st December, 1889, amounted to 114,299 tons, of which 76,165 tons were "Round," and 26,815 tons "Slack." The coal sales during the same period were :—

To Nova Scotia	14,560
" New Brunswick	5,500
" Prince Edward Island	3,650
" Quebec	54,750
" Newfoundland	15,658
" United States	6,100
" Bunker steamers	2,000
" Colliery employees	3,000

Total sales (tons), 1889 105,218

THE CANADA COMPANY.

Incorporated 1826. Capital £891,500, in shares of £100 each. The Capital was originally in £100 shares, of which £32 10s. was paid up: £31 10s. per share has been repaid, leaving £1 per share. By a private Act, passed in 1881, all revenue beyond £4 per share per annum is to be applied in cancelling shares by purchase, in the market, at a price not exceeding £100; such shares, however, not to be diminished in number below half the original number (8,915). Under this Act 596 shares have been purchased and extinguished, leaving 8,319 shares of £1 each, on which there is no further liability. Accounts made up annually to 31st December and presented in March; but the dividends are declared half-yearly at meetings held at the end of June and December, and are payable on 10th July and 10th January. Surplus balance of assets over liability at 31st December, 1888, £628,055. Dividends per share since 1878 to 1886 averaged £4 per share; 1887, £3 10s. per share; 1888 and 1889, £2 per share. A dividend of £1 per share was paid on 10th January, 1890.

Directors :

R. Gillespie, (Governor).
 M. Biddulph, M.P., | W. W. Heygate,
 J. P. Currie, | Hon. F. S. A. Hanbury Tracey, M.P.
 Head Office: Gisborne Molineux, Secretary, East India Avenue, Leadenhall Street,
 London, E. C.

Canadian Office: 204 King Street East, Toronto, Ont,

Hon. G. W. Allan, Commissioner. | Alfred Willson, Commissioner.

The company issues, and is prepared to issue, Licenses to prospect, or to work the minerals on the following of their lands in Eastern Ontario, upon terms to be known on application to the company or its mining inspectors:—

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	ALFRED.		BELMONT.		BURGESS S.
3	2, 3.	1	Rem. 3, 16, 30.	3	4.
7	S hf. 7.	2	W. hf. 5, E. hf. 11, 19.		BURLEIGH.
11	S hf. 4, 7.	3	3, 30.	1	5.
12	5.	4	E hf. 11, 19, 28.	2	3.
13	4.	5	E. hf. 3, 16, 24, 30.		CALEDONIA.
	ALNWICK.	6	21, 28.	2	15, 18.
6	15.	7	3, 16, 30.	3	11, 18, 21, 23.
	ASPHODEL.	8	19, W. hf. 21, 28.	4	14, N. hf. 15, N. hf. 20.
12	9.	9	24, 30.	5	23.
	BASTARD.	10	E. hf. 11, W. hf. 19, 21,		CAMBRIDGE.
1	Pt. of 14.		28.	1	S. hf. 4, 11, 18.
	BATHURST.	11	W. hf. 16, 24.	2	E. hf. 2, 8, 15, S hf. 23.
8	W. hf. 3.	12	19, 21.	3	4, 11.
9	4.		BRIGHTON.	4	2, 8, 15, S hf 23, E hf 30
10	W. hf. 3.	9	28.	5	26.
12	F. hf. 8.	10	24, E. pt. 30.	8	2.
	BECKWITH.		BURGESS N.	9	4 (Rem.)
1	22.	3	(14, 27.	10	2 (Rem.)
2	E. hf. 23.	4	23.		CAMDEN EAST.
5	N. E. hf. 14, E. hf. 26.	5	14, 22.	8	N. hf. 9, N. hf. 51.
6	F. hf. 16.	7	4.	9	25.

THE CANADA CO.--Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	CARTWRIGHT.		DALHOUSIE.		ELZEVIR.
1	S. hf. 23.	10	3, 16, 23.	1	W. hf. 5, 21.
	CLARENCE.	11	4, 14, 22, 27.	2	Rem. W. hf. 3.
1	E. hf. 6.	12	3, 16, 23.	3	5, E. hf. 11, 21.
2	E. hf. 9.		DARLING.	4	9, E. hf. 16.
3	B.	1	Rem. 4, 14, 19, 22.	5	N. hf. 5, 11.
6	W. hf. 9, E. hf. 24.	2	3, 8, 16, W. hf. 23.	6	N. hf. and N. hf. S. hf. 3, 9.
8	9, 24.	3	4, 14, 19, E. hf. 22.	8	3.
9	W. hf. E. hf. 11, 21.	4	3, 8, 16, 23.	9	5.
10	W. hf. 16, W. hf. 24.	5	4, 14, E. hf. 19, 22.		EMILY.
11	21.	6	16, 23.	5	N. hf. 11.
	CLARKE.	7	14, 22.	8	S. hf. 15.
9	N. hf. 5, N. hf. 11.	8	19, 23.	10	20.
10	9, 16.	9	W. hf. 4, 22.	11	W. hf. 11, 21.
	CRAMAHE.	10	W. hf. 16, 23.		ENNISMORE.
10	30.	11	E. hf. 14, 22.	3	9.
	CROSBY N.	12	3, 8, W. hf. 16, 19, F pt. 23.		ESCOTT.
1	E. hf. 21, 23.		DARLINGTON.	6	17.
2	S. hf. 15, S. hf. E. hf. 26.	10	Rem. 16.		FINCH.
3	11.		DOURO.	9	S. hf. E. hf. 23.
5	E. hf. 23.	1	28.		FITZROY.
6	25.	2	24.	1	4.
7	21.	3	21.	4	3.
8	N. hf. 20, 25.		DRUMMOND.	5	W. hf. 4.
9	R. hf. 4, 21, 23.	4	N. E. hf. 3.	11	W. hf. 4.
10	20.	5	4.	12	8.
	CROSBY S.	10	N. pt. 16.		GLOUCESTER (On Ottawa).
3	23.		DUMMER.	4	S. hf. 9.
5	S. E. pt. 21.	1	28.	5	3.
8	S. E. pt. 5.	2	E. hf. 3, 16.	6	N. hf. 4.
9	4, 11.	3	28.	9	2.
10	15, 25.	4	30.		GOULBURN.
	CUMBERLAND.	5	W. hf. 11, 20, 28.	11	14.
1	Rem. W. hf. 5, E. hf. 14, 21.	6	W. hf. and N. hf. E. hf. 16, W. hf. 30.	12	8, 16.
2	W. hf. 16, 24.	7	11, 21.		HALDIMAND.
3	28.	8	W. hf. and N. hf. E. hf. 9, 16, 24, W. hf. 30.	7	S. hf. 5, 11, N. hf. 21.
6	9.	9	21.	8	9.
10	Rem. E. hf. 9, W. hf. 16, 24.	10	E. hf. 3, W. hf. and S. hf. E. hf. 9, 16, 24.		HAMILTON.
11	11, W. hf. 21, N. pt. 23.	11	11, 21.	9	N. pt. 34.
	DALHOUSIE.	12	16, 24.		HARVEY.
1	E. hf. 4, W. hf. 22, 27.		EDWARDSBURGH.	4	11.
2	E. hf. 23.	9	S. hf. 33.	5	9.
3	E. hf. 22, 27.	10	31, 33, 37.	7	Pt. 9.
4	F. hf. 3, 8.		ELMSLEY N.	10	5, W. pt. 11.
5	E. hf. 2, 14, W. hf. 22, 27.		ELMSLEY S.	11	3, 9, N. pt. 16.
6	16, 23.	5	S. pt. W. hf. 14.	12	5.
7	14, 22, 27.	8	S. hf. 8.	13	3.
8	3, E. hf. 16, 23.		ELMSLEY, S.	15	W. hf. 9.
9	4, 22, 27.	1	29.		HAWKESBURY W.
				9	S. pt. 17.

THE CANADA CO.—Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	HOPPE.		LAVANT.		MARMORA.
7	S. hf. 34.	1	4.	1	E hf. 5, 11, E hf. 19. rem. E hf. 21, 28.
	HUNGERFORD.	3	4.	2	E hf. 3, 16, N hf. W hf. 24, 30.
1	S. hf. 9.	4	3, 16.	3	W hf. 19, 21, 28.
2	N. hf. 10, N. hf. 17.	5	4, W, hf. 14.	4	E hf. 24, 30.
3	S. hf. 11, S. hf. 28.	6	W. hf. 3, 8, 23.	5	21, 28.
4	15, S. hf. 27.	7	4, 22.	6	24, 30.
5	W. hf. 9, S. hf. 16, S. hf. 23.	8	3, 8, 16.	7	W hf. 5, W hf. 11, 19, 21, 28.
6	N. hf. 22, E. hf. of S. hf. and N. hf. 29.	9	W hf. 4.	8	Rem. E hf. 16, 24, 30. 9, 5, 11, 19, E hf. 21, 28.
7	S. hf. 21, 36.	12	8.	10	3, E pt. 16, 24, 30.
8	N. hf. 27, S. hf. 32.		LEEDS.	11	5, 11, 13, 28.
10	S. hf. of W. hf. and N. hf. 29, 34.	7	S. hf. 21.		MONTAGUE.
12	E. hf. 15, 20, N. hf. 27.		LOUGHBOROUGH.	3	NE hf. 4, E hf. 14.
13	S. hf. 2, E. hf. 16, 23, 33.	6	S. hf. 24.	5	NW hf. NE hf. 4, 22.
14	17, 22, 29.	7	N. hf. 21.	6	3, 8, E hf. 16, W hf. 23.
	HUNTINGDON.	9	N. hf. W. hf. 4, 11, 23.	7	E hf. 14, R hf. 22.
6	N. hf. 15.	10	5, 15 (Rem.)	9	S hf. 14, E hf. 22.
8	N. hf. 17.	11	4, 11.	10	3, 8, S pt. E hf. 23.
9	Rem. S hf. 6.	12	N. pt. 5, 15, N. hf. 24.		MOUNTAIN.
10	W. hf. 5, 15.	13	N. hf. 4, 11, 21, 23.	9	E hf. S hf. 21. . .
11	E. hf. 4, 11.	14	5, S. pt. 15.	10	15.
12	S. hf. 3, S. hf. 17.		MADOC	11	11.
13	9, 16.	1	5, N hf. 11, 28.	12	S hf. 15, 20.
14	S. hf. 15, 20.	2	3, W hf. 9, 16, 24, 30.		MURRAY.
	HUNTLEY.	3	W hf. 4, 28.	9	21.
1	N. W. hf. 22.	4	30.	10	16.
2	23.	6	E hf. 9, pt. 16, 30.		OSGOODE.
6	8.	7	E hf. 21, 28.	7	W hf. 9.
7	W. hf. 4.	8	24, 30.	11	3.
8	3, W. hf. 16.	9	W hf. 28.		OTANABEE.
9	F. hf. 4, R. hf. 22.	10	W hf. N hf. 9.	6	9.
10	E. hf. 3.	11	5, 21, pt. 28.	12	9.
11	W. hf. 14.		MANVERS.		PAKENHAM.
12	W. hf. 16.	1	N hf. 4, S hf. 11.	1	4, 14.
	LANARK.	3	4 N hf. 11.	2	3, 8, 16, 19.
1	E. hf. 22, 27.	4	N hf. 5, 15.	3	4, E hf. 22.
2	23.	11	E hf. 21.	4	W hf. 8, 16.
3	E. hf. 22.		MARCH.	5	14 E hf. 22.
5	27.	1	25.	6	E hf. 16, 23.
6	23.		MARIPOSA.	7	F hf. 14, W hf. 19, W hf. 22.
7	1, 3, 22.	1	N hf. 23.	8	E hf. 16.
9	F. hf. 22, 27.		MARLBOROUGH.	9	R hf. 14.
12	23.	2	27.	10	F hf. 16.
	LANSDOWNE.	3	30.		PLANTAGENET, S.
8	17.	4	N hf. 13, 16, N hf. 23.	2	R hf. 34, R hf. 36.
9	11.	5	14, 22.	3	S hf. 21, 23.
10	15, 20.	6	S hf. 16, 23.	4	20.
		7	R hf. 14, 22, R hf. 29.		
		8	28.		
		9	28, 30.		
		10	8, 23, 27.		

THE CANADA CO.—Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.		
	PLANTAGENET N.		RUSSELL.		SHERBROOEE S.		
5	4, W hf. N hf. 21, 23.	7	N hf. E hf. 15.	7	F hf. 11.		
7	N hf. 21.	8	16, E hf. 21.	8	E hf. 15, 20.		
	PLANTAGENET S.		9	13, 15.	9	SE hf. 11.	
12	N hf. 15.	10	W hf. 16, 21.	10	NE hf. 15.		
14	14, 19.		SEYMOUR.	11	R hf. 11.		
15	20, 22.	10	N hf. 20.	12	R hf. 15, 20.		
16	N hf. 19.	11	21.		SIDNEY.		
17	22.	13	Pt. 11, 23.	8	S hf. 25.		
19	20, E hf. 22.	15	23.	9	Rem. S hf. 21.		
20	19.		SHEFFIELD.		SMITH.		
	PORTLAND.		1	21, 28.	14	34, 44.	
8	N hf. 17.		2	24, 30.	15	Pt. 21, N hf. 38.	
9	Rem. N hf. 19.		3	28.	16	S pt. 44.	
11	N hf. 7.		4	24, 30.	17	38.	
12	E hf. 17, 24.		5	21, 28.		STORRINGTON.	
13	19, 25.		6	16, 24.	8	Rem. E hf. 15, 16.	
14	S hf. 24.		7	21, 28.	9	18.	
	RAMSAY.		8	16, 24.	10	22.	
1	22, 27.		9	21, 28.	11	21, 28.	
3	E hf. 4, E hf. 27.		10	16, 24.	12	3, S hf. 24, 30.	
5	27.		11	11, S hf. 21.	13	5, 2, 28.	
6	15.		12	3, E hf. 16, 24.	14	3.	
11	22.		13	5, 11, 21.	15	11, 21.	
12	S hf. E hf. 15.		14	S hf. 3, 16, 24.		TORBOLTON.	
	RAWDON.		15	5, E hf. 11, 21.	1	SW hf. 22.	
8	Rem. 15.		16	16, 24.	5	4, 14.	
9	Pt. 4.			SHERBROOKE N.	6	8.	
10	5.		1	4, W hf. 14, 22.		VERULAM	
11	Rem. 4.		2	3, 16, 23.	19	3.	
13	4, N hf. 11, W hf. 21, 23.		3	F hf. 4, 14.		WINCHESTER.	
14	N hf. 5, pt. 15, S hf. 20.		4	F hf. 3, 8.	7	W hf. 11.	
	RICHMOND.		5	4.	8	W hf. 20.	
9	N hf. 5.			SHERBROOKE S.	9	N hf. 4.	
10	1.		1	R hf. 4, R hf. 21.	10	S hf. 5.	
	ROXBOROUGH.			4	15.		WOLFORD.
9	N hf. 13, N hf. 14, 15, 16, 17, 18, 19.			5	4, 11.	2	3.
				6	10, 15.	4	N hf. 16.

The following lands have been sold by the Company, reserving the minerals, for which also licenses will be issued:—

	ALFRED.		ALNWICK.		BASTARD.
1	A.	3	N hf. 21.	1	Rem. 14.
2	A.		ASPHODEL.	2	S hf. 3, 16.
3	22, N hf. 28, A	1	E hf. 19.		BATHURST.
4	S hf. 5, N hf. 13, E hf. 15.	2	S hf. 3, E hf. 16.	8	E hf. 3.
5	4, W hf. 16.	6	9.		BECKWITH.
6	5, S hf. 15.	10	W hf. 19.	5	{ SW hf. 14.
7	N hf. 7, 11.		ATHOL.		{ W hf. 26.
8	13.	5	E of } W pt. 5.	6	R hf. 16.
11	N hf. 4.		E.L.	7	W hf. 22.

THE CANADA CO.—Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	BELMONT.		CAMDEN E.		CUMBERLAND.
1	Pt. 3.	9	S hf. 7, S hf. 9; R hf. 21,	5	E hf. 11, 28.
2	E hf. 5.		27, S hf. 23, 29, W hf.	6	3.
3	Rem. 3.		31, S hf. 37, S hf. 35,	7	5, 21.
4	5, W hf. 11.		41, S hf. 47.	8	E hf. 16.
5	W hf. 3.		CARTWRIGHT.	9	5, 21, W hf. B.
6	5, 11.	1	4, S hf. 21, N hf. 23.	10	E hf. 3, pt. 9, E hf. 16.
8	11, 19, E hf. 21.	9	N hf. 21, N hf. 23.	11	E hf. 21, E pt. 28, B.
9	W hf. 3, W hf. 10.	13	Rem. of N pt. 23.	0	W hf. 2.
10	W hf. 11, E hf. 19.		CAVAN.		DALHOUSIE.
11	E hf. 16.	2	hf. 4.	1	W hf. 4, 14, E hf. 22.
12	11.	2	N hf. 15.	2	E hf. 16, W hf. 23.
	BRIGHTON.		CLARENCE.	3	4, W hf. 22.
8	E hf. 24.	1	5, W hf. 6, 11, 21.	4	W hf. 23.
10	W pt. 30.	2	3, W hf. 9, W hf. 16, 24.	5	W hf. 2, E hf. 22.
	BURGESS, N.	3	21, N hf. A.	6	8.
4	16.	4	9, E hf. 16, 24.	7	R hf. 4.
5	27.	5	W hf. 5, W hf. 11, W	8	SW hf. 8, W hf. 16.
7	22.		hf. 21		DARLING.
	BURGESS, S.	6	16, W hf. 24.	2	E hf. 23.
1	14.	7	11, 21.	3	W hf. 22.
2	3, 23.	8	3, 16.	5	W hf. 19.
5	27.	9	N hf. B, 5 E hf. E hf. 11.	6	E hf. 3.
7	22.	10	3, E hf. 16, E hf. 24.	7	E hf. 4.
	CALEDONIA.		CLARKE.	8	8, 16.
1	23, S hf. 24.	9	S hf. 21.	9	E hf. 4, 14.
2	S hf. 20.		CRAMAHE	10	R hf. 3, 8, E hf. 16.
5	S hf. 11.	6	W hf. 3.	11	E hf. 4, W hf. 14.
6	5, 15, 20.	9	N hf. 5, N hf. 34.		DARLINGTON.
7	4, 11, 21, 23.		CROSEY, N.	10	3, pt. 16.
8	F. hf. 5, 20, 15.	1	11, W hf. 21.		DOURO.
9	21, 23.	2	5, N hf. 20, Rem. 26.	1	W hf. 5.
10	F. hf. 15, 20.	3	E hf. 21, 23, 24, 25.	2	E hf. 3, E hf. 9.
	CAMBRIDGE.	4	N hf. 15, 20, 25, 26, 27.	4	W hf. 16.
1	N hf. 4, 26.	5	11, 21, 24, 25, 26, 27.	5	E hf. 11.
2	W hf. 2, N hf. 23, 30.	6	15, 20.		DRUMMOND.
3	18, 26.	7	N hf. 23.	3	22, 27.
4	N hf. 23, W hf. 30.	9	S hf. 4.		DUMMER.
5	4, 18.	10	5.	1	E hf. 21.
6	2, E hf. 8, 23, E hf. 26, 30.		CROSBY, S.	2	W hf. 24.
7	4, 18, 26.	2	R hf. 5.	3	E hf. 21.
8	8, 23, 30.	3	R hf. 4.	4	W hf. 9, W hf. 24.
9	11, W hf. 18, W hf. 26.	4	S hf. 5, SW. hf. 15.	5	E hf. 11.
10	S hf. 8, 15, 23, 30.	5	4.	6	Pt. E hf. 9, S hf. E hf.
	CAMDEN, E.	6	5.		16, 32.
3	NE hf. of NW hf. 9.	8	NW 5.	8	E hf. 3, S hf. E hf. 9,
5	R hf. 6.	10	20.		E hf. 30.
6	N hf. 2, N hf. 20, 51.		CUMBERLAND.	9	E hf. 5, 11.
7	S hf. 1, S hf. 14, S hf. 47.	1	5 SW pt 5, W hf. 14, 28.	10	N hf. E hf. 9.
8	S hf. 9, 11, N. hf. 21, N	2	9, E hf. 16.	11	W hf. 5.
	hf. 23, N hf. 27, S hf.	3	5, 11, E hf. 21.	12	S pt. 3, 9.
	51.	4	9, E hf. 15, 24.		

THE CANADA CO.—Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	EDWARDSBURG.		GLOUCESTER, O. F.		HUNGERFORD.
9	F hf. 6, E hf. 31.	8	S hf. 7, 13, 19.	9	W pt. 16, S hf. 23, N hf. 33.
10	30, 32, 35, 36.	9	W hf. 8, 14.	10	E hf. 17, 22, S hf. E hf. 29.
	ELIZABETHTOWN.		GLOUCESTER, R. F.	11	E hf. 21, 28.
11	7, 17.	2	W hf. 14, R hf. 22, W hf. 28.	13	N hf. 2.
	ELMSLEY S.		GOULBURN.	14	3.
5	W hf. 4.	5	13, 23.		HUNTINGDON.
8	N hf. 8, N. hf. E hf. 23.	6	14, S hf. 18, 22, E hf. 28.	7	E hf. 11.
	ELZEVIR.		GOULBURN.	8	10, S hf. 17.
2	W hf. 9, pt. W hf. 3.	1	14.	9	N hf. pt. and S hf. 16.
3	W hf. 11.	5	22, E pt. 27.	10	E hf. 5.
6	S hf. 5, 3.	6	R pt. 23.	11	W hf. 4, 19.
	EMILY.	7	27.	12	N hf. 3, E hf. 10, N hf. 17.
7	N qr. 4, 11.	10	N hf. 8, 16.		HUNTLEY.
8	N hf. 5.	11	4.	1	SE hf. 22, 27.
9	21, 11.		GOWER, N.	2	F hf. 3.
11	N hf. 4, E hf. 11.	2	N hf. 29, NW hf. 33, W pt. 38.	3	E hf. 22, 27.
12	5, E hf. 15.	3	R hf. 8, 38.	4	R hf. 3.
13	N hf. 4, 11, S hf. 21.	4	F hf. 4, 9, 29, 34, 39.	5	R hf. 4, 14.
14	S hf. 15, 20.		GOWER, S.	6	3, 16.
	ENNISMORE.	7	W hf. 11.	7	14, R hf. 22.
1	4.	8	W hf. 5.	8	3, E hf. 16, 23.
2	S pt. 5.		HALDIMAND.	9	R hf. 4, R hf. 14, F hf. 22.
3	N hf. 4.	5	N hf. 11.	10	W hf. 3, F hf. 23.
6	S hf. 5.	6	N hf. 24.	11	E hf. 14.
7	N hf. 11.	9	N hf. 28.	12	R hf. 3, E hf. 16.
8	N hf. 5, 10, 15.		HAMILTON.		KITLEY.
	FINCH.	9	S pt. 34.	2	S hf. 23.
1	N hf. 11.		HARVEY.	3	N hf. 29.
2	N hf. 5.	13	16.	7	14.
3	N hf. 4, N hf. 11.	14	5, 11.		LANARK.
4	5.	15	3, E hf. 9.	1	F hf. 4, W hf. 22.
5	E hf. 4, N hf. 23.	16	5, 11.	3	E hf. 14, 27.
6	W hf. 5, N hf. 20.	17	3, 9.	4	8, W hf. 16, 23.
7	4, 11, 21, 23.	18	N hf. 16, 21.	6	E pt. 2, E hf. 3, F hf. 8.
8	15, R hf. 20.	19	9, 16, 24.	7	27.
9	S hf. 4, E hf. 21, rem. 23.		HAWKESBURY, E.	8	W pt. 16, 23.
10	15.	3	17.	9	R hf. 22.
11	4.	5	S hf. 1.	10	10, 16.
12	N hf. 5.	6	2, 13, S hf. 20.	11	22.
	FITZROY.	7	S hf. 2, 17.		LANCASTER.
5	E hf. 4.	8	W hf. 3.	9	6.
9	F hf. 14.		HUNGERFORD.		LANSDOWNE.
10	R hf. 8.	1	W hf. 16, 23, 33.	5	A.
11	E hf. 4, 16.	2	W hf. 3, S hf. 17, 22, 29.	7	4, W hf. 11.
	GLOUCESTER, O. F.	3	E hf. 4, 21, N hf. 28, 35.	8	10, pt. 17.
2	S hf. 4, S hf. 14.	4	E hf. 20, N hf. 27, 32.	11	S hf. 11.
3	13.	5	E hf. 9, N hf. 16, 33.	12	3.
4	N hf. 9.	6	W hf. S hf. 29, 34.		
6	N hf. 18.	7	N hf. 21, 28.		
7	S hf. 3, R hf. 9, W hf. 17.	8	S hf. 20, S hf. 27, N 32.		

THE CANADA CO.—Continued.

Con.	Townshps and Lots.	Con.	Townships and Lots.	Con.	T wnhships and Lots.
	LAVANT.		MARCH.		MURRAY.
2	E pt. 23.	1	22, 23, 27.	7	S hf. 5, N hf. 28.
3	W hf. 14, E hf. 22, W hf. 23.	4	27.	8	30.
4	8, 23.		MARIPOSA.	10	9.
5	E hf. 14, 22.	3	N hf. 21.		NEPEAN.
6	E hf. 3, 8, 12, 16, 23.	4	S hf. 5.	2	F hf. 18.
7	14.	9	N hf. 11.	3	E hf. 23, R hf. 13.
8	23.	11	S hf. 11.	4	E hf. 9.
9	E hf. 4, 14, 22, 25.	15	21, N hf. 23.	5	3.
10	3, 8, 12, 16.		MARLBORO.		OSGOODE.
11	14.	1	2.	bf	37.
12	Pt. 3.	2	E hf. 1, 3, 29.	1	23, F hf. 29.
13	4.	3	28.	3	R hf. 3, 33.
	LEEDS.	4	S hf. 13, S hf. 23, E hf. 28.	4	W hf. 2, 17, W hf. 22, E hf. 27, 32.
4	E hf. 17.	6	28.	5	W hf. 13, E hf. 23.
5	21.	7	F hf. 29.	6	4, NW hf. 13, 24, W hf. 32.
6	E hf. 22.	8	23.	7	W hf. 3, F. hf. 17.
7	E hf. 21.	bf	4	8	W hf. 7, W hf. 13, E hf. 19
9	E hf. 11.		MARMORA	9	2, 8, E hf. 14, F. 28.
	LOCHIEL.	1	W hf. 19, Rem. 21.	10	3, 13, E hf. 23, F hf. 33.
2	N hf. 1, N hf. 2, N hf. 5.	2	Rem. 24.	11	13.
	LOUGHBORO'.	3	E hf. 19.	12	N hf. 20.
7	E hf. 11, S hf. 21, 23.	4	E hf. 16, W hf. 24.		OTANABEE.
8	W hf. 5.	5	19.	2	E hf. 30.
9	E hf., S hf. and W hf. 4, 21.	6	3.	6	W hf. 30.
10	24, 15 pt.	7	E hf. 5, Rem. W hf. 11.	9	W hf. 28.
11	21, 23.	8	S hf. 3, Rem. 16.		OXFORD.
12	S hf. 24.	10	W pt. 16.	6	S hf. 5.
13	S hf. 4.	11	19, 21.	7	F hf. 4.
14	N pt. 15.		MONOGHAN.	8	1.
	MADOC.	5	14.		PAKENHAM.
2	E hf. 9.	6	W hf. 4.	3	W hf. 22, 25.
3	5, W hf. 11, W hf. 21.		MONTAGUE.	4	3, W hf. 8.
4	W hf. 3, 9, W hf. 16, 24.	2	W hf. 8.	5	E hf. 4, R hf. 22.
5	E hf. 5.	4	E hf. 8.	6	E hf. 3, W hf. 8, W hf. 16
6	W hf. 9, pt. 16, E hf. 24.	5	Pt. NE hf. 4.	7	R hf. 14, E hf. 19, F hf. 22
8	E hf. 16.	7	F hf. 22.	8	W hf. 16.
10	3, S hf. and E hf. of N hf. 9, 16.	8	R hf. 3, E hf. 16.	9	22.
11	8, 11.	9	Rem. 14, E hf. 29.	10	W hf. 23.
	MANVERS.	10	SW hf. 16.	12	3.
1	S hf. 4, N hf. 11, S hf. 21, 23.	A	W hf. 14.		PALMERSTON.
2	N hf. 5, S hf. 15.		MOUNTAIN.	9	11.
3	S hf. 11, 21.	1	E hf. 23.	10	W pt. 9.
11	W hf. 21.	3	F hf. 21, 23.		PERCY.
13	S hf. 21, 23.	5	4, F hf. 23.	2	N hf. 5.
14	N hf. 5, 20.	6	W hf. 5.	3	N hf. 4.
		8	S hf. 15.	7	S hf. 11.
		9	Rem. 21.	9	23.
		10	S hf. 20.	10	E hf. of S hf. 20, N hf. 20.
		11	N hf. 4, 21.		

THE CANADA CO.—Continued.

Con.	Townships and Lots.	Con.	Townships and Lots.	Con.	Townships and Lots.
	PLANTAGENET.		RICHMOND.		SIDNEY.
1	W hf. 1, 37.	10	8, 17, N. hf. 13.	7	S hf. 2, 4, 6, 8, N hf. 22.
2	E hf. 15, N hf. 22, 29, F hf. 34, F. hf. 36.	11	3, 9.	8	N hf. 5, E. hf. 13, S. hf. 21.
3	W hf. 21.	9	ROXBORO.' N. hf. 8, S. hf. 13, S. hf. 14.	9	1, 8, S hf. 33, 37. SMITH.
4	E pt. 5, 15.			6	15.
5	11 Rem. 21.		RUSSELL.	9	29.
6	15, N hf. 20.	1	W. hf. 15.	13	S hf. 28, N hf. 38.
7	N hf. 11, S hf. 21.	2	27.	15	20 Rem. 21, S hf. 38.
8	W hf. 5, 15, S hf. 20.	3	W. hf. 8, 13, E. hf. 15.	16	22 N pt. 44.
9	S hf. 4, R hf. 11, S hf. 23.	4	47.		
10	S hf. 5.	5	S. hf. 1, E. hf. 8, 13, 15.		STORRINGTON (PITTS- BURGH).
11	4, 21, N hf. 23.	6	16, 21.	8	Pt. 15, N pt. of N hf. 17.
12	20.	7	13, Rem. 15.	9	27, W hf. 31, N hf. 34, S hf. 36.
13	S hf. 21, S hf. 23.	8	E. hf. 7, W. hf. 21.	10	E hf. 15, E hf. 29.
14	W hf. 4.	9	W. hf. 8.	11	5, 11.
15	3, 10.	10	7, E. hf. 16.	12	9, 16, N hf. 24.
16	4, 14, S hf. 19.		SEYMOUR.	14	16.
17	3, 10, 20.	1	4, 21, 23.	15	5.
18	14, 19.	3	N. hf. 4.		THURLOW.
19	10, W hf. 22.	4	S. hf. 15.	8	S hf. 30.
20	14.	6	S. hf. 5.	9	W hf. 5.
	PORTLAND.	10	5, 15.		TORBOLTON.
9	7, S pt. of N hf. 19.	11	4, N. hf. 23.	1	S hf. 4, F hf. 11, F hf. 14, NE hf. 22.
10	6, 17, 24.	12	5, S. hf. 20.	3	NE hf. 14.
11	S hf. 7.	13	Rem. 11, 21.	4	3.
12	6 11, W hf. 17.	14	N. pt. 5, 15, 20.		WILLIAMSBURG.
13	7.	15	4, 11, 21.	8	R hf. 2, R hf. 3, W hf. 5.
14	W hf. 6, 11, W hf. 17.		SHEFFIELD.		WINCHESTER.
	RAMSAY.	1	E. hf. 5, 11.	2	N hf. 15.
2	N. hf. of E. hf. 8.	2	E. hf. 9.	3	E hf. 21, F N 23.
3	W. hf. 4, E. hf. 14, E hf. 22, W. hf. 24, W. hf. 27.	8	3.	5	N hf. 4, E hf. 21.
4	E. hf. 15, R. hf. 23.	9	R. hf. 5, 11.	6	N hf. 15.
5	14, F. hf. 22.	10	3.	7	E hf. 11.
10	W. hf. 8, E. hf. 23.	11	5, N. hf. 21.	8	W hf. 15, E hf. 20.
11	27.	12	W. hf. 16.	9	S hf. 4, S hf. 21, N hf. 23.
12	N. hf. E. hf. 15, 23.	15	W. hf. 11.	10	N hf. 5, F hf. 15.
	RAWDON.		SHERBROOKE N.	11	11.
8	Rem. 15.	1	E. hf. 14, 27.	12	15, 20.
9	Rem. 4.	3	R. hf. 4.		WOLFORD.
11	S. hf. 11, N. hf. 21, N. hf. 23.	4	R. hf. 3.	3	S hf. 2, S hf. 17.
12	5.		SHERBROOKE S.	4	3.
14	S. hf. 5, pt. 15.	1	F. hf. 4.	5	S hf. 27.
	RICHMOND.	2	R. hf. 5, F. hf. 21.	8	16, 23.
5	N. hf. 10.	3	21.		YONGE.
8	F. hf. 10, S. hf. 16.	4	5, W. hf. 20.	5	22.
9	3, N. hf. 7, 9, N. hf. 14, 15, N. hf. 16, R. hf. 17.	5	W. hf. 21.		
		8	W. hf. 15.		
		9	N. W. hf. 11.		
		10	SW hf. 10.		
		11	F 11.		

THE CANADIAN ANTHRACITE COAL CO. (Ltd.)

Incorporated 28th October, 1886. Capital Stock, \$1,000,000, fully subscribed and paid up.

Directors :

Macleod Stewart, Ottawa, <i>President</i> ,	
O. H. Ingram, Eau Claire, Wis.,	Hon. J. G. Thorp, Cambridge, Mass.,
L. S. Tainter, Menomonie, "	John Stewart, Ottawa,
A. Pugh, St. Paul, Minn.,	Levi Crannell, "
W. B. Scarth, M.P., Winnipeg, Man.,	Archibald Stewart, Ottawa,

Head Office : Union Chambers, 14 Metcalfe Street, Ottawa, Ont.

Formed to mine and extract coal, especially anthracite coal, in the Dominion of Canada, and generally to carry on the business of colliery proprietors, miners and engineers, in all their branches; and also the trade or business of carriers by water, of coal, minerals and other freight from, to and within Canada, etc., etc. The Company owns about 7,000 acres of coal lands in the district of Alberta, in the North-West Territories, and is at present operating the Banff Colliery. About 30,000 tons of coal have been raised. Average number of men employed, 200. Annual meeting held on the second Wednesday in August of each year. Estimated value of plant, \$150,000. At the last annual meeting held on 13th August, 1890, the capital was increased from \$500,000 to \$1,000,000, and arrangements made to carry on more extensive mining operations than heretofore.

THE CANADA INDUSTRIAL CO. (Ltd.)

Incorporated 19th May, 1883. Capital Stock, \$50,000, in 500 shares of \$100 each.

Head Office : C. B. Falardeau, Manager Director, Montreal.

Formed to acquire and work phosphate and other mineral lands in the district of Templeton, in the Province of Quebec. Not in active operation 1889-90.

THE CANADIAN COPPER CO.

Organized 5th January, 1886. Capital Stock, \$2,500,000, fully subscribed and paid up.

Directors :

T. W. Cornell, Akron, O., <i>President</i> .	
G. G. Allan, Akron, O.,	C. W. Bingham, Cleveland, O.,
Hon. S. Burke, Cleveland, O.,	H. P. McIntosh, Cleveland, O.

Head Office : A. S. McIntosh, Sec.-Treas., Rooms 201 and 202 Perry-Payne Building, 763 to 709 Superior Street, Cleveland, Ohio, U.S.A.

This company is the owner of mineral lands in the Townships of Blezard, Creighton, McKim and Snider, in the District of Algoma, in all about 10,000 acres, and is at present operating the extensive nickel and copper mines known as the "Stobie," "Evans," and "Copper Cliff," at Sudbury, Ontario. No. 1 furnace was

THE CANADIAN C. CO.—Continued.

blown in for the first time on the 24th Dec., 1888, and ran from that time to December 31st 1889, 259 days of 24 hours, using 31,268 tons of ore and producing therefrom 3,849 tons of matte, averaging probably about 18 per cent. copper and 13 per cent. nickel. In this operation there were consumed 3,950 tons of Connellsville coke, costing about \$6.50 per ton at Sudbury. Smelter No. 2 started September 4th, 1889, and ran 73 days from that period to December 31st, using 9,740 tons of ore, and producing 1,210 tons of matte, averaging probably about the same per cent. copper and nickel as No. 1. This furnace consumed 1,169 tons of coke. Shipments to Philadelphia, New York, Swansea, Liverpool and Hamburg. The main shaft at the Copper Cliff mine is sunk at an angle of 45°, and at 1st September, 1890, had attained a depth on the slope of 458 feet. The vertical depth of the main shaft of the Evans' mine is a little over 160 feet. About 300 men and boys were employed during the year 1890. The average yearly production is officially stated to be fully 60,000 tons Cu. Ni. ore. These mines are equipped with a first class working plant, buildings, etc.

General Manager: John D. Evans, Sudbury, Ont.

Mine Captains:

Copper Cliff Mine,
Capt. J. M. Jones.

Evans' Mine,
Capt. Alfred James.

Smelter,
Jas. McArthur.

THE CANADIAN GRANITE CO.

Incorporated 23rd February, 1885. Capital, \$50,000, fully subscribed and paid up.

Directors:

A. Maclean, Managing Director, Ottawa.
J. C. Roger, Ottawa, | Macleod Stewart, Ottawa.

Head Office: Ottawa, Ont.

Formed to carry on the trade or business of carriers by water, of granite and other freights from, to and within Canada: to work, quarry, raise, make merchantable, sell and produce granite, etc.

The company's granite quarry, is situated on the east cove of Kingston Harbour. The stone obtained varies somewhat in character, sometimes having a gneissic structure, but elsewhere being quite massive. The color is generally some tint of red with grey wavy markings. It is claimed to be peculiarly adapted for decorative purposes, and is much in demand for buildings and monuments. Large quantities of paving blocks are now being prepared at the quarry. In 1885 the company established works in the City of Ottawa. These are located on the basin of the Rideau Canal, which affords easy and cheap transport by water to the Kingston quarry. The mill has been fitted up with all the most improved machinery, including a granite-turning lathe capable of turning columns, &c., up to a diameter of 3 feet and length of 20 feet; two large double polishing lathes; one marble-turning lathe; two granite-polishing jennies; one vertical polishing machine; double-pendulum polishing machine; large granite-polishing machine with carriage, with a surface capacity of about 84 superficial feet; one basin hole cutter and boring machine; Shortsleeve's patent gang saw, capable of sawing blocks 11 feet long by 9 feet wide, fed by one of Shortsleeve's automatic sand-feed machines; rubbing bed 11 feet in diameter with marble machine; Shortsleeve's new patent marble-moulding and counter-sinking machines, &c. The Company also owns and operates a marble quarry at Renfrew, Ont. Estimated value of machinery plant at quarries and works \$30,000. Average men employed, 30.

Manager: C. J. Roger, Ottawa.

Quarrymaster: Wm. Davey, Kingston. | *Foreman of Works:* M. Shields, Ottawa.

THE CANADIAN SMELTING & REFINING CO. (Limited.)

Incorporated January, 1891. Authorized Capital Stock \$100,000, divided into 100,000 shares of \$1 each.

Directors :

Joseph R. Wyman, | Edgar K. Spinney,
| E. Franklin Clements.

Head Office : E. Franklin Clements, Secretary, Yarmouth, N.S.

Formed to buy, sell, prospect, operate, lease, mortgage, and deal in mines, mining areas, quarries, ores, mine metals and metallic substances, etc. The properties owned are situate in Yarmouth, Digby and Queen's Counties, in the Province of Nova Scotia. It is purposed to erect smelting and refining works in the town of Yarmouth.

Chemist and Metallurgist : E. Støstedt.

THE CARIBOO CREEK MINING CO. (Ltd.)

Incorporated 19th June, 1889. Capital Stock \$10,000, divided into 1,000 shares of \$10 each.

Directors :

David Woolsey, | A. J. Smith, | Thomas Forrest.

Head Office : Donald, B.C.

This company owns and operates several claims in the Illecillewaet sub-division of the West Kootenay mining district, Province of British Columbia. Mining operations during the year 1889 were confined to driving a tunnel to tap the vein running through the "Maple," "Quebec" and "Corona," about 400 feet from the surface. A small force employed.

Mine Superintendent : David Woolsey, Illecillewaet, B.C.

THE CARIBOO QUARTZ MINING CO.

Incorporated 17th June, 1878. Authorized Capital \$120,000, divided into 60,000 shares of a value of \$2 each.

Directors :

George Byrnes, | J. B. Nason. | S. V. Voekenburg,
Samuel Walker, | | William Forrest.
Joseph Mason, | | Charles Wilson.

Head Office : Barkerville, Cariboo District, B.C.

Formed to operate four locations in the Cariboo District. Since merged into the B. C. Mining and Milling Company.

THE COLONIAL IRON, COAL & RAILWAY CORPORATION (Ltd.)

Incorporated 17th April, 1889. Capital Stock \$500,000, in shares of \$100 each.

Directors :

H. H. Fuller, Halifax.	
R. G. Leckie, Londonderry, N.S.,	| T. J. Tucks, Sherbrooke, Que.,
Chas. Annand, Halifax, N.S.,	| C. A. Stayner Halifax.

Head Office : Halifax.

THE COLUMBIA MINING CO. (Ltd.)

Incorporated 7th August, 1890. Authorized Capital \$500,000, divided into 5,000 shares of a value of \$100 each.

Directors :

E. J. Brickell, President.	
Wm. A. Donaldson,	| M. Thomsen,
George Herb,	| O. B. Nelson.

Head Office : George Herb, Secretary, Spokane Falls, Wash., U.S.A.

This company owns six full mining claims consisting in the aggregate of 125 acres of land, and located at Hot Springs, in the West Kootenai district, Province of British Columbia. Small force employed in 1890, to be increased as soon as railway transportation is secured.

THE COWAN GOLD MINING CO.

Incorporated 1886. Capital Stock \$50,000 in 500 shares of \$100 each.

Directors :

Hon. L. E. Baker, Yarmouth, N.S.,	
Jas D. Dennis, Yarmouth, N.S.,	| Thos. B. Crosby, Yarmouth, N.S.

Head Office : Thomas B. Crosby, Yarmouth, N.S.

Formed to acquire and work gold areas in the Province of Nova Scotia, of which 24 are held and worked under lease from the Government at Kemptville, in the County of Yarmouth. The yield of gold for the year ended 31st December, 1889, amounted to 190 ozs., 10 dwts., from 214 tons of rock crushed. Owing to the loss of the mill, mining operations during that period were necessarily limited.

THE CROWFOOT COAL CO.

Incorporated, 8th April, 1890. Nominal Capital Stock, \$125,000, in 1,250 shares of \$100 each.

Directors :

W. A. Allan, Ottawa,
Heber Archibald, Winnipeg, | Arthur F. Eden, Winnipeg.

Head Office : J. R. Fullerton, Secretary, 180 Owen Street, Winnipeg.

Formed to acquire by purchase, lease, surrender, gift, exchange or otherwise, a tract or tracts of coal lands, or lands assumed or reported to cover or contain deposits of coal or like deposits in Manitoba, British Columbia or the North-West Territories of Canada, and to own, hold, work, develop, sell, lease, mortgage or otherwise deal therewith, etc., etc.

THE CROW'S NEST COAL & MINERAL CO. (Ltd.)

Incorporated 25th March, 1889. Authorized Capital, \$2,000,000 divided into 20,000 shares of a par value of \$100 each.

Directors :

President : Lt.-Col. James Baker,
Joseph D. Pemberton, | Peter C. Fernie,
Wm. Fernie, | Edward Bray.
A. W. Vowell.

Head Office : F. D. Pemberton, Secretary, 45 Fort St., Victoria, B.C.

This Company owns 11,000 acres of coal lands situate near Martin Creek, and also near Morrissey Creek, in the East Kootenay district, Province of British Columbia. Up to 1st October, 1890, \$30,000 have been expended on prospecting and preliminary development, but mining on a more extensive scale will not be begun until better shipping facilities have been provided. Average men employed in 1890, 10. An analysis of a sample of fast coking gave:—

Hydroscopic water	2'12
Volatile combustible matter	26'92
Fixed carbon	43'48
Ash	27'48
	100'00
Coke, per cent	70'96

Superintendent : Wm. Fernie, Victoria, B.C.

THE CUMBERLAND COAL MINING CO.

Directors :

Sir George Stephen, Bart., Montreal,
Sir Charles Tennant, Glasgow, | A. T. Paterson, Montreal,
A. S. McLelland, Glasgow, | John Turnbull, Montreal,
Hon. D. McInnes, Hamilton, | R. McD. Paterson, Montreal.

Head Office : James Phymister, Secretary, 35 St^e Francois-Xavier Street, Montreal, Que.

THE CUMBERLAND C. M. CO.—Continued.

This Company, which is practically the same as that of the Londonderry Iron Co., (Limited), holds some four square miles of coal areas in the Province of Nova Scotia, and is the owner of the Chignecto colliery, at Maccan, in the County of Cumberland. Depth of slopes, 600 feet; dip 40°; width of seam from 9 feet to 14 feet. During the year ended 31st December, 1889, 18,572 tons of coal were raised. Sixty-five men and boys employed above and below ground; double engines, 16 inches to 2½ feet, geared 1 to 4 for hoisting; one locomotive 30 tons; railway 2½ miles (steel rails) to connect with I. C. R., and every necessary equipment for a business of 500 tons daily.

General Manager : R. G. Leckie, Londonderry, N.S.

Mine Manager : James Baird, Maccan, N.S.

Underground Managers : F. Burrows, Wm. Lormier.

THE CUMBERLAND RAILWAY AND COAL CO.,
(Limited).

Incorporated 25th May, 1883. Capital Stock \$2,000,000.

Directors :

President : John McDougall,

A. Cowan, *Vice-Pres.*

G. A. Drummond,

James Crossen,

David Morrice,

J. R. Cowans,

H. R. Drummond, *Secy.*

Head Office : Imperial Buildings, Place d'Armes, Montreal.

Formed to acquire, work and further develop coal lands, of which ten square miles are held under lease from the Government of Nova Scotia. The quantity of coal mined from the Company's collieries at Springhill, Cumberland County, during the year 1889, was 425,149 tons; of this there were sold :—

	TONS.
To Nova Scotia	90,847½
New Brunswick.....	93,527
Quebec.....	172,405½
United States	9,986
Colliery employees.....	3,445
Total sales.....	272,211

On an average about 1,100 men are employed at the mines and works.

General Manager : J. R. Cowans, Springhill, Cumberland Co., N.S.

THE DOMINION MARBLE CO.

Incorporated 5th January, 1886. Authorized Capital \$100,000, divided into 2,000 shares of a value of \$50 each, of which, to 1st November, 1890, 1000 shares of a value of \$50,000 have been subscribed and fully paid up.

Directors :

President . Thomas J. Tuck,

Joseph Webster,

E. B. Lorimer,

Wm. White.

Head Office : Wiliam White, Secretary, Sherbrooke, N.S.

THE DOMINION M. CO.—Continued.

This Company owns about 200 acres of land containing certain deposits of an excellent quality of marble, in the Township of Dudswell, County of Wolfe, Province of Quebec. Estimated value of plant, machinery, buildings, etc., \$10,000. The quarries of the Company were not in active operation during the years 1889-90, but work will be resumed immediately on the completion of the extension of the Dudswell Lime Company's railway to the quarries. At 1st October, 1890, this railway had been built to a point about two miles from the Company's property.

Dr. R. W. Ellis, (Geol. Survey Rep., 1886, p. 68, J.), states that the marble is of several colours, takes a beautiful polish and presents a very handsome appearance, especially in a kind known locally as "black and gold," the yellow being due to veins of dolomite. There are also several shades, of grey. In places the ledge is composed entirely of fossil corals, the polished slabs of which present a very peculiar and pretty mottled appearance.

THE DOMINION PHOSPHATE & MINING CO.
(Limited).

Incorporated 25th May, 1883. Capital Stock \$125,000, in shares of \$100 each, fully subscribed and paid up.

Directors :

President : Henry Earle, New York,
 T. C. Keefer, Ottawa, | Chas. Kyte, New York.
 W. H. Nicholls, New York.

Head Offices : 103 St. Francois-Xavier St., Montreal ; 68 William St.,
 New York.

Formed to acquire and work phosphate and other mineral lands in the County of Ottawa, Province of Quebec. The properties owned and operated are known as the North Star and Washington mines in Township of Portland East, Ottawa County, Que. The former is held in fee-simple, the latter the company own the mining rights only. Considerable development work has been done at the North Star, from which, during the year 1889, about 8,350 tons of phosphates were exported, mainly to Europe. The mines are well equipped with buildings and a good working plant. Average men employed about 60.

Mine Superintendent : Capt. T. W. Williams, North Star Mines, via Buckingham, Que.

THE DU LIEVRES MILLING & MANUFACTURING CO.

Head Office : Seabury, Bassin du Lievre, Que.

The mills and property situate at Seabury, Bassin du Lievre, in the Province of Quebec, formerly owned and operated by this Company, for the purpose of grinding raw phosphates, etc., have been acquired by Mr. F. S. Shirley, New Bedford, Mass., U.S.A., who is now sole owner. The mills have a capacity of from forty to fifty tons per day, are equipped with a fair plant, and possess a first-class water power. At 1st August, 1890, the owner was making arrangements for further improvements with a view to a resumption of active work.

THE EAST WELLINGTON COAL CO.

Nominal Capital \$1,500,000.

Directors :

J. Lawrence Pool, *President*, San Francisco,
 J. Eastland, *Vice-President*, San Francisco,
 Col. Mendall, *Director*, San Francisco,
 R. D. Chandler, *Treasurer*, San Francisco,
 Wm. Whitney, *Secretary*, San Francisco.

Head Office : 507-509 East St., San Francisco, Cal.

The Company owns and operates the East Wellington Colliery at Nanaimo, in the Province of British Columbia.

During the year ended 31st December, 1889, 190 men were employed, and the output of coal was as follows:—

Home consumption.....	7,636
Exported.....	43,089
On hand 1st January, 1890.	547
Tons.....	51,272

The value of the working plant at that date was estimated to have been \$140,000. The seam varies from 2½ to 7½ feet; 5 levels; 2 shafts; narrow guage railroad 4½ miles; 2 locomotives; 34½ ton cars; 2 pair of hoisting engines; one large donkey engine; one steam pile driver; and one steam saw mill, having a capacity of 12,000 feet per diem. The colliery officials are:—

Superintendent : W. S. Chandler, Nanaimo, B.C.*

Underground Manager : Robert Dunn.

THE ELARTON SALT WORKS CO. (Ltd.)

Incorporated 2nd July, 1885. Authorized Capital \$10,000, divided into 100 shares of a value of \$100 each.

President : Frederick W. Kingstone,

Head Office : Charles J. Kingstone, Sec.-Treas., Warwick West, Ont.

This Company owns and operates a property 7 9-10th acres in extent, and known as the north-east corner of the east half of Lot 6, in the 3rd Concession, Township of Warwick, Lambton County, Ontario, formerly worked by the late A. J. Kingstone and his executors. Depth of wells, 1,200 feet. A small force employed.

THE EMPIRE CONSOLIDATED GOLD MINING CO.

Incorporated 25th July, 1890. Authorized Capital, \$500,000, in 50,000 shares of a value of \$10 each.

Directors :

A. E. Davidson,		P. J. Nason,
S. Oppenheimer,	|	Michael Maloy,
Martin Cooney,		

Head Office : Martin Coony, Secretary, Spokane Falls, Wash.

THE EMPIRE C. G. M. CO—Continued—

Formed to acquire and work certain mineral lands located near Hot Springs, in the Kootenai mining district, Province of British Columbia. 10 men employed.

Superintendent : P. J. Nason, Hot Springs, B.C.

THE EUSTIS MINING CO.

Principal Owner :

W. E. C. Eustis, 46 Mason Building, Boston, Mass.

Head Office : Capelton, Que.

The mines and smelting works of this Company are situated at Capelton, in the Eastern Townships of the Province of Quebec. In 1889, there were mined and exported 34,089 tons of copper ore, including 1,773 tons of matte. The greater part of this output is shipped in the raw state to the acid works near New York, but about 1,000 to 1,200 tons per month are smelted at the mines, the sulphur, which represents about 40 per cent of the ore, being burned off and wasted. The ore contains a small amount of silver, from 3 to 4 per cent., which forms an important feature in the value of the output. Depth of main shaft (on incline) 1,725 feet. There is also a second shaft 1,570 feet from the surface, measuring on the dip of the veins. Average number of men employed 175. At the smelting works there are two cupolas of 75 tons capacity each, with engines boilers and necessary fans to run them. There are also roasting kilns of a capacity of 1,200 tons per month.

Minn Superintendent : John Blue, Capelton, Que.

THE FAIRBANK CONSOLIDATED MINING CO. OF ONTARIO (Ltd.)

Incorporated 26th June, 1890. Nominal Capital Stock \$500,000, in shares of \$5 each.

Incorporators :

Joseph Barrett,
D. A. Howland,
Richard Craddock,
Lt.-Col. G. A. Shaw,

W. G. Shaw.

Alex. Rankin,
J. R. Gordon,
R. H. Ahn,
J. L. Nichols,

Head Office : J. L. Nichols, Room D, Yonge St., Arcade, Toronto.

Formed to acquire and work mineral lands in the Province of Ontario, more particularly 1,152¼ acres in the Townships of Creighton, Fairbank and Trill, in the Sudbury region, district of Algoma, Ont.

THE FLEMING PHOSPHATE MINING CO.

Directors :

S. H. Fleming, Ottawa, Ont.,

W. A. Allan, Ottawa, Ont.

Head Office : S. H. Fleming, Victoria Chambers, Wellington Street, Ottawa, Ont.

THE FLEMING P. M. CO.—Continued.

Formed to acquire, work, and further develop phosphate lands in the Township of Templeton, Ottawa County, Province of Quebec. At 1st December, 1890, five men were employed on Lot 35, Township of Templeton.

THE GENERAL PHOSPHATE CORPORATION (Ltd.)

Registered 1890. Authorized Capital £1,000,000 stg., divided into 99,500 ordinary shares of £10 each, and 500 founders' shares of £10 each. After the ordinary shareholders shall have received a dividend equal to 10 per cent. per annum, the holders of the founders' shares will (after provision for a reserve fund) be entitled to one half of the remaining profits in each year, and the other half will be divided among the holders of ordinary shares. 20,000 shares have been subscribed equal to a Capital of £200,000.

Directors :

Rt. Hon. Lord Stalbridge.

Sir James Whitehead, Bart.,
Sir George S. Baden Powell,
Sampson S. Lloyd.

Sir Jacob Wilson,
Hon. Cecil T. Parker,
H. Mallaby Leeley.

Head Office : E. B. Francis, Secretary, 23 College Hill, Cannon Street, London, E. C.

Formed for the purpose of acquiring, working, developing and dealing in well selected phosphate properties in Canada, and elsewhere. In 1890 the Corporation purchased from Mr. George Stewart, Ottawa, the High Falls mining property, consisting of Lot 6 in the 6th Range of Portland West, and Lots 1, 2, 3, 4, 5 and 6 in the 4th Range of Bowman, in the County of Ottawa, Province of Quebec, in all about 863 acres in extent. The purchase consideration is reported to have been \$40,000 stg., subject to certain conditions. In 1890 the Corporation had purchased or held the controlling interest in the following properties situate in the County of Ottawa, Province of Quebec :—

"HIGH FALLS GROUP."

	Acres.
Lot 6, 10th Range, Portland West ; Lots 1, 2, 3, 4, 5 and 6, 4th Range, Bowman.....

"BOWMAN GROUP."

Lots 17, 18, 32 and 33 3rd Range, Bowman ; Lots 31 and 32, 2nd Range, Bowman.....	1,450
---	-------

"ROSS MOUNTAIN GROUP."

Lots 5 and 6 in 6th Range, Portland West ; Lots 1 and 2 in 7th Range, Portland West.....	454
--	-----

"PETERSON GROUP."

Lots 1, 2, 8 and 10, Gore, Templeton.....	556
---	-----

"MURPHY LOTS."

Lots 3 and 4, (south halves) 7th Range, Templeton.....	200
--	-----

Total acres.....	2,660
------------------	-------

Mining operations were begun in November on the High Falls property. When in full working order 100 men will be employed.

Canadian Office : J. Lanson Wills, Manager, 206 Albert Street Ottawa, Ont.

Mining Contractor : George Stewart, Buckingham, Que.

THE GOLDEN MINING & SMELTING CO. OF CANADA.

Incorporated 1890. Capital Stock \$400,000, divided into 4,000 shares of \$100 each.

Directors :

	George Alexander, Calgary, Alta.,		Peter McCarthy, Calgary, Alta.,
H. B. Alexander, Calgary, Alta.,	|		John L. Bowen,
J. A. Lougheed,	"	"	"

Head Office : Golden City, B.C.

Formed for the purpose of erecting, operating and owning works for smelting, refining and otherwise treating mineral ore; also for purchasing and selling mineral ore; purchasing and holding interests in mineral claims; and of buying and selling, and otherwise dealing in the same, etc., etc. The mines at present owned and operated by the Company consist of certain argentiferous galena locations situate at Field, on the line of the C.P.R., and are known as the "Caine" (on Cathedral Mountain) and the "Carleton" (on Tunnel Mountain); the latter being a continuation of the "lode" of the celebrated Monarch mines. The smelting works of the Company at Golden were nearly completed at 1st September, 1890. The dimensions of the buildings and style and make of plant are as follows:—One building for offices and analytical laboratory, 20 x 30; one for roaster furnace, 70 x 80; one for 2 calcining furnaces and ore crusher, 53 x 53, with an additional shed for coke, 53 x 13; one ore house, 40 x 40; also a receiving platform, 90 x 76, close to a spur of the C.P.R., capable of accommodating 12 box cars. There will also be a shed for coal fuel, 20 x 40. These buildings will be composed of square timbers with shingled roofing, and the usual precautionary measures in case of fire. The most of the plant was manufactured by Fraser & Chalmers, of Chicago, Ill., and consists of one water jacket furnace, 7 x 10, with No. 4 blower, 33 x 72; and one Blake crusher, 14 x 24. The belt rolls and sample grinder, 5 feet 6 inches, power elevator and all casting for the calcining furnaces were also furnished by the American firm. The motive power will consist of one 30-horse power slide valve engine and tubular boiler, 12 feet long by 42 inches in diameter; these were manufactured in Toronto. The supply of water will be taken from the Kicking Horse, by means of a No. 6½ Knowles pump, capable of a volume of 150 gallons per minute. This plant is intended or adapted to treat ores of the sulphurous or argentiferous galena class, but will also reduce ores carrying a limited percentage of copper. These works are intended to treat about 40 tons of ore in 24 hours, and will employ a minimum of about 30 actual workmen, exclusive of supernumeraries, if kept running in full blast.

Superintendent : S. S. Fowler, Golden, B.C.

THE GRAND LAKE COAL CO.

Incorporated 22nd September, 1888. Capital Stock, \$200,000, divided into 2,000 shares of a value of \$100 each.

Directors :

John P. Isley, Philadelphia, President.	
Louis G. de Bertram, New York.	| Thos. M. Williamson, Buctouche, N.B.

Head Office : Chipman, N.B.

This Company owns 5,000 acres of coal lands in the Newcastle Districts, and in addition 500 acres at Chipman, Queen's County, in the Province of New Brunswick. Not at present in operation.

THE GRAVEL BAY MINING CO. OF ONTARIO (Limited).

Incorporated 25th January, 1890, under the Ontario Joint Stock Companies Letters Patent Act. Nominal Capital \$100,000, in 20,000 shares of \$5 each.

Directors :

Hugh Wilson, Mount Forrest, Ont.	|	F. T. Sibley, Detroit, U.S.A.
J. J. Kingsmill, Walkerton, Ont.	|	W. E. Price, Montreal, Que.
W. A. Dickson, New York.		

Head Office : William P. Torrance, Secretary, Toronto.

Formed to acquire, work and further develop mineral lands in the Province Ontario, particularly mining location A, West White Fish River, Nepigon Bay, in the Thunder Bay district. Was not in operation during 1890.

THE HALIBURTON MINING CO. (Ltd.)

Incorporated 1890. Capital Stock \$100,000 in 1,000 shares of \$100 each, of which at 1st September, \$2,000 had been subscribed and paid up.

Directors :

	|	J. J. Gartshore, Toronto, Ont.,
C. S. Gzowski, Toronto, Ont.,	|	W. H. L. Gordon, Toronto, Ont.
J. S. Lockie, Toronto, Ont.,	|	C. E. Doolittle, Hamilton, "

Head Office : J. S. Lockie, Secretary, Toronto, Ont.

Formed to acquire and work mineral lands in the provisional County of Haliburton, and also in the Counties of Victoria and Peterborough, in the Province of Ontario. The property owned consists of 1,262 acres in the 11th, 12th and 13th Concessions of Monmouth. At 1st September, 1890, only a small force were at work, mainly prospecting, under direction of F. S. Miller, M.E.

THE HIDDEN TREASURE MINING CO. (Ltd.)

Incorporated 25th June, 1888. Authorized Capital, \$100,000, divided into 10,000 shares of a value of \$10, each.

Directors :

John Morrison,	|	Robert H. Lees,
J. S. Chase,	|	Robert McDougall.

Head Office : R. H. Lee, Secretary, Kamloops, B.C.

Formed for the purpose of acquiring, prospecting, working and developing lodes or veins of gold or silver bearing quartz and other minerals, etc., in the Province of British Columbia.

THE HIDDEN TREASURE M. C.—Continued.

No stockholder is individually liable for the debts or liabilities of the Corporation; but the liabilities of a stockholder is limited to his proportion (based upon the amount of his respective shares) of which he is the holder as shown by the Stockholders' Register Book of the Corporation; and charges thereon, when taken, shall not exceed in the aggregate the amount realised for his share of the stock and Company property at private or public sale.

The claims owned by the Company are three in number, each measuring 600 x 1,500 feet on Cherry Creek, Okanagan district. Was not in active operation in 1889.

Mine Superintendent - John Morrison, Vernon, B.C.

THE HYNES TERRA COTTA & BRICK CO. (Ltd.)

Incorporated 16th April, 1888. Capital, \$200,000.

Directors :

William J. Hynes, Michael J. Hynes, George W. Banks.

Head Office : H. K. Smith, Treasurer, Toronto.

This Company owns and operates 100 acres, containing a red clay deposit, situate in the county and township of Toronto, Province of Ontario. It also manufactures terra cotta and brick in the City of Toronto. Twenty-five men employed. Estimated yearly turnout of a value of \$25,000. Machinery plant valued at \$12,000.

THE INTERCOLONIAL COAL MINING CO. (Ltd.)

Incorporated 1867 by Act of the Legislature of Nova Scotia.

	<i>Capital.</i>	<i>Authorized.</i>	<i>Issued.</i>
Common Stock		\$500,000	\$500,000
Preferred Stock		250,000	219,700
First mortgage bonds		250,000	250,000

Directors :

Gilbert Scott, President.

Henry A. Budden, Robert Anderson,
James P. Cleghorn, Alexander Gunn,
Hartland S. Macdougall, Thomas Wilson,
W. M. Ramsay, Peter Redpath.

Head Office : Wm. J. Nelson, Secretary, 199 Commissioner Street, Montreal, Que.

This Company holds one and three-quarter square miles of coal areas under lease from the Government of Nova Scotia, and is the owner of the Drummond Colliery at Westville, in the County of Pictou, Nova Scotia. Eleven to 13 ft. seam of coal worked; seam dips 15 degrees, worked by slopes, now 3,300 ft. long; lifts every 500 ft.; counterbalance planes every 450 to 500 ft. Ventilation by exhaust fan, 20 ft. by 7 ft.; speed, 45 per m.; current, 100,000 ft. per m.—alternative jet in upcast; lamps, Clanny. Winding engines, pair 16 in. by 24 in.; V friction geared 2 to 1; drums, 8 ft. dia.; work singly or connected; hauls gross weight 25,000 lbs up 1,800 ft.

THE INTERCOLONIAL C. M. CO.—Continued.

1 m. 30 sec. ; lowered by break in 1 m. ; W. engine underground ; single compound 16 in and 28 in. ; pinion fitted with Fisher's patent clutch ; engine with Joyce's pat. expansion valve gear (new) ; steam pipe 5 in. Pumping:—3 steam pumps, one 18 in. and 8 in. by 36 in. ; vertical lift 347 ft. ; column, 10 in. cast ; independent condenser boilers, steel, 30 ft. by 5.5 ft., two flues and egg end ; flash 30 ft. by 3.5 ft. There are also 20 Bee-Hive coke ovens, machine shops, et., etc. The Company's sales for the year 1889 were as follows :

To Nova Scotia	54,833
To New Brunswick	7,082
To Prince Edward Island	5,471
To Quebec	54,532
To Newfoundland	101
To Colliery employees	2,099

Total sales 1889 124,118

Average number of men employed 1889, 350 ; in 1890, 380 men and boys.

Mine Manager : Charles Fergie, M.E. Drummond Colliery, Westville, Nova Scotia.

THE INTERNATIONAL COAL CO. (Ltd.)

Incorporated 15th November, 1883. Capital Stock \$300,000, divided into 3,000 shares of \$100 each.

Directors.

Hugh McLennan,	
Sir Donald A. Smith,	A. Kingman,
John McLennan,	T. B. Brown,
G. Cheney,	John S. McLennan.

Head Office : 14 Custom House Square, Montreal, Que.

This company holds under lease from the Government of Nova Scotia some five square miles of coal areas, and is the owner of the International Colliery at Bridgeport, on the Island of Cape Breton. Seam 6 feet. A shaft to a depth of 90 feet has been sunk to seam, and from the bottom of this shaft there is an incline 2,800 feet from which levels are worked. Winding engine on surface runs two drums, one set of boxes running down by gravity while engine is hauling the other up ; 9 tubs, of an average capacity of 19 cwt. each, are run on each trip, and 95 trips are made per diem. The following are the official returns of the men employed during the year 1889 : On surface : skilled labor, 35 ; labor, 114 ; total, 149 ; underground : skilled labor, 182 ; labor, 71 ; total, 253 ; or total men and boys employed in 1889, 402. The total output of coal for the same period amounted to 124,568 tons. Sales as follows :—

Sold to	Tons.
Nova Scotia	3,417
New Brunswick	5,725
Quebec	87,704
Newfoundland	1,996
Prince Edward Island	76
United States	3,224
Bunker steamers	20,861
Colliery employees	1,505

Total sales, 1889..... 124,568

General Manager : J. G. S. Hudson, Bridgeport, C.B.

THE KALADAR MINING CO.

Incorporated, 1890. Capital Stock \$120,000, in 6,000 shares, a value of \$20 each.

Directors:

H. M. Doroche, Napanee, Ont.	J. H. Downey, Napanee, Ont.
Wm. Miller, Napanee, Ont.	R. A. Helliwell, Chicago, Ill.
John Guina, Township of Kaladar, Ont.	Fredk. Burrows, Napanee, Ont.
Dennis Guina, do do	

Head Office : Napanee, Ont.

Formed to acquire and work mineral lands in the Township of Kaladar, and also in the Counties of Lennox and Addington and elsewhere in the Province of Ontario.

THE KINGSTON & PEMBROKE IRON MINING CO.

Capital Stock \$5,000,000.

Directors :

Henry Seibert, New York, President.	
J. D. Flower, New York, N.Y.	B. W. Folger, Kingston, Ont.
W. G. Pollock, Cleveland, Ohio.	F. A. Folger, " "
W. E. Cooper, New York, N.Y.	C. F. Gildersleeve, " "

Head Office ; George Osborne, Secretary, Kingston, Ont.

The Freehold and Leasehold mines of the Kingston and Pembroke Iron Mining Company, comprise, with other property, the mines formerly operated by the "Glendower," "Zanesville," "Roberts," "Mississippi," "Levant" and "Calabogie" Mining Companies. The acreage is as follows: -

TOWNSHIP OF BEDFORD, County of Frontenac :	Acres.	TOWNSHIP OF LAVANT, County of Lanark :	Acres.
E. 1/2 Lot 3, 1st Con.....	100	Lot 4, 12th Con.....	200
Lot 4, 1st Con.....	200	E. 1/2 Lot 22, 4th Con.....	100
E. 1/2 Lot 6, 2nd Con.....	100	TOWNSHIP OF SOUTH SHERBROOKE :	
N. 1/2 Lot 5, 2nd Con.....	100	Part of Lot 14, 8th Con.....	60
Part S. 1/2 5, 3rd Con.....	50	N. 1/2 Lot 17, 7th Con.....	100
Part Lot 6, 3rd Con.....	50	TOWNSHIP OF BATHURST, County of Lanark :	
TOWNSHIP OF OSO :		N. E. 1/2 Lot 1, 6th Con.....	100
N. W. 1/2 Lot 13, 6th Con.....	69	Lot 3, 6th Con.....	200
14, 6th Con.....	200	W. 1/2 Lot 6, 6th Con.....	100
12, 8th Con.....	200	TOWNSHIP OF BAGOT, County of Renfrew :	
22, 10th Con.....	200	E. 1/2 Lot 16, 11th Con.....	100
Part Lot 14, 1st Con.....	52	E. 1/2 Lot 24, 10th Con.....	100
TOWNSHIP OF PALMERSTON :		Lot 22, 11th Con.....	200
W. 1/2 Lot 3 and part of E. 1/2 Lot 3, 9th Con.....	106	N. 1/2 Lot 21, 7th Con.....	100
E. 1/2 Lot 5, 6th Con.....	100	N. 1/2 Lot 21, 8th Con.....	100
E. 1/2 Lot 1, 9th Con.....	100	N. 1/2 Lot 23, 9th Con. }	
E. 1/2 Lot 2, 9th Con.....	100	F. 1/2 Lot 23, 10th Con. }	120
Lot 6, 9th Con.....	200		
N. 1/2 Lot 6, 10th Con.....	100		
E. 1/2 Lot 6, 11th Con.....	100		
Lot 7, 10th Con.....	200		

Or a total acreage of 3,907 acres.

THE KINGSVILLE NATURAL GAS & OIL CO. (Ltd.)

Incorporated 1890. Capital Stock, \$43,750, in 2,187 shares of \$20 each.

Directors :

	James Haley Smart,	
Solomon Wigle,	|	David Conklin,
Sidney King,	|	Joseph Fitch.

Head Office : Kingsville, County Essex, Ont.

Formed to erect refineries and warehouses, to purchase, lease, acquire, sell and demise petroleum refineries, oil lands and other lands, and hereditaments, and to sink, open, work and pump artesian wells and to produce petroleum, salt and other minerals. To sink and operate artesian wells for natural gas and to produce, sell and deal in the same and to lay down, construct and maintain lines for the conveyance of such gas, petroleum or other fluid in the Province of Ontario. To manufacture, buy, sell and deal in oil, producers' oil, refiners' and natural gas supplies. To enter into contracts for any or all of the purposes aforesaid, and to do all such other matters and things as are incidental or conducive to the attainments of the objects aforesaid or any of them; and the same to sell, lease or otherwise dispose of as the Company may see fit; to amalgamate with any other Company or Companies having objects similar or in part similar to those of this Company; and generally to do all such other things as the Company may deem incidental or conducive to any of the above objects.

THE KOKSILAH QUARRY CO. (Ltd.)

Incorporated 1890. Capital Stock, \$100,000, divided into 1,000 shares of \$100 each.

Trustees :

Joseph Hunter,	|	Peter Dunlevy,	|	Theodore Subbe.
----------------	--	----------------	--	-----------------

Head Office : Victoria, B.C.

Formed to quarry, dress, ship, sell and otherwise dispose of marble, granite, sandstone and other stone.

THE LA CUMBRE MINING CO. OF TORONTO (Ltd.)

Incorporated December, 1890. Authorized Capital \$70,000, divided into 1,400 shares of a value of \$50 each.

Directors :

	Joseph Ruse,	
Frederick Le Maitre Grasset,	|	Frederick William Kingstone,
Edmund St. George Baldwin,	|	William Bridgeman-Simpson.

Head Office : Toronto, Ont.

Formed to purchase, acquire, explore, improve, work, lease, sell and otherwise operate and deal with mines, mining lands, mining claims and mining rights in the Dominion of Canada and elsewhere, and also to purchase, erect, lease and operate in the Dominion of Canada and elsewhere, mills, stamps and mining machinery, materials and implements necessary or convenient for the treatment of mineral ores.

THE LAKE SUPERIOR MINERAL LAND DEVELOPMENT CO.

Incorporated 26th October, 1887. Authorised Capital Stock \$1,000,000, divided into 10,000 shares of \$100 each, of which, to date, 25% has been subscribed and paid up.

Directors :

	President :	J. Bury,	
C. F. Linscott,	|		M. H. Killgallen,
G. C. Thomas,	|		George Rector.

Head Office : 69 Home Insurance Buildings, Chicago, Ill.; M. H. Killgallen, Secretary, May-fair, Cook Co., Ill.

This Company owns 11,276 acres of mineral lands in the Townships of McIntyre, McGregor, Blake, Crooks, McTavish and Shebandowan Lake, in the district of Thunder Bay, in the Province of Ontario. On the property in the Township of McIntyre, two shafts have been sunk to a depth of 45 feet and 55 feet respectively. Work to date has been purely of an exploratory character. The Company's properties contain gold, silver, iron and other minerals.

Superintendent : P. M. French, Port Arthur, Ont.

THE LAKE VIEW MINING CO. (Ltd.)

Incorporated under the laws of Nova Scotia, 17th April, 1889. Capital Stock \$500,000 in shares of \$100 each.

Directors :

	Frank B. Allen, President, Newark, N. J.		
Wm. Linn Allen, Newark, N. J.	|		Thos. W. Crooks, Newark, N. J.,
J. C. McDonald, " " "	|		Edward P. Ward, " " "

Head Office : Wm. Linn Allen, 802 Broad Street, Newark, N. J.

This Company holds 121 gold areas under lease from the Government of Nova Scotia. The mine is situated at Waverley, Halifax County, N. S., and is well equipped, with excellent accommodation for the miners, and has a first-class working plant, including engine and shaft house, boiler house, blacksmiths' shops, office, magazine, compressor house, 20 stamp quartz mill, frue-vanner house, laboratory, etc. Up to the 30th July, 1890, the main shaft had been sunk to a depth of 360 feet, and 2,700 feet of levels driven. At that date about 40,000 tons of rock were ready for the mill, which was expected to yield regular returns from September. From 50 to 75 men are employed.

Mine Superintendent : A. A. Hayward, Waverley, Halifax County, Nova Scotia.

THE LAURIER MINING CO.

Registered in October, 1889. Capital \$25,000.

Directors :

	Hon. W. Laurier.		
J. Lavergne, M. P.,	|		F. Beauchene,
L. Lavergne, N. P.,	|		T. Barie.

Head Office : J. Lavergne, Secretary, Arthabaskaville, Que.

THE LAURIER M. CO.—Continued.

Formed to acquire and work asbestos and other mineral lands in the Province of Quebec. The company owns a small asbestos property adjoining the mines of the Anglo-Canadian Asbestos Company, in the district of Black Lake; also properties in the Townships of Chester, Tingwick and Ham, all in the Eastern Townships of the Province of Quebec. Fifteen men employed.

Mine Superintendent : L. N. Langvin, Black Lake, Que.

THE LILLOOET HYDRAULIC MINING CO. (Ltd.)

Incorporated 21st August, 1889. Authorized Capital \$20,000, divided into eight shares of a value of \$2,500 each, of which to 1st September, 1890, \$10,000 had been subscribed and paid up.

Directors :

A. McDonald, | Wm. Tietgen, | W. Collier.

Head Office: Lillooet, B.C.

Formed to acquire and work alluvial deposits in the Province of British Columbia. The company owns 160 acres, situate on the right bank of the Fraser River, at a point in the immediate vicinity of the town of Lillooet, B.C.. The workings to date consist of two open cuts into the gravel bank, each 300 feet in length, and of an average width of 60 feet, and a depth of 30 feet. Eight men employed.

Superintendent : A. McDonald, Lillooet, B.C.

THE LONDONDERRY IRON CO. (Ltd.)

Incorporated 1887 under special charter from the Federal Government. Authorized Capital Stock preferred : \$400,000 ; ordinary, \$600,000.

Directors :

Sir George Stephen, Bart., Montreal.	
Sir Charles Tennant, Glasgow,	A. T. Paterson, Montreal,
A. S. McClelland, " "	John Turnbull, " "
Hon. D. McInnes, Hamilton, Ont.	R. McD. Paterson, " "

Head Office: James Phymister, Secretary, 35 St. Francois Xavier Street, Montreal.

Formed to acquire the property, mines, telegraph lines, machinery, plant, materials and other assets of the Steel Company of Canada, Limited, for the sum of three hundred thousand dollars of preferential shares, and such amount, not exceeding four hundred thousand dollars of ordinary shares, to be used in paying off the bondholders and ordinary creditors of that Company, as may be necessary for that purpose, together with such undertaking for the payment of the indebtedness incurred by the liquidator of the said Steel Company of Canada, and such minor arrangements as to details as may be finally agreed upon by the Company and the liquidator

THE LONDONDERRY IRON CO.—Continued.

of the said Steel Company of Canada, with the authority of the proper court; and, upon the completion of the arrangements for such acquisition, to issue as paid-up shares such preferred and ordinary shares as shall be required for the performance of the obligations to be assumed by the Company; and as a means of providing for the expense of completing the said arrangements and of procuring the means of carrying out the same, of remunerating divers agents and others who have been engaged in negotiating the same in Canada and in England, and generally of relieving the Company from all liability in respect of any and all preliminary proceedings and arrangements, the Company is authorized to make and use a further issue of paid-up ordinary shares, not exceeding in all the sum of \$80,000; also to construct and operate such other roads and additions to the said railway, tramway, and telegraph line, in connection with the said mines and properties, or the rights they may have acquired, as are needed for their business; also to acquire, charter and operate vessels, steamers and other suitable craft for the transportation of the products of their business to ports in Canada or to any foreign port or ports. Annual meeting held on the second Wednesday of each year, at which the affairs of the Company are submitted to the 31st December preceding. Dividends at the rate of 6 per cent. on the Preferred Stock have been paid for the years 1889 and 1890, dividends payable 1st March each year. The Company's property covers about 36,000 acres freehold. Machinery, plant, etc., valued at \$150,000. About 800 men and boys employed at mines and works. Mining has been carried on here since 1849. A charcoal furnace was erected in 1853, which was in blast at short intervals for some years. Two improved blast furnaces, with a weekly capacity of from 500 to 600 tons, were subsequently erected, the fuel used being coke, and the capacity of the puddling furnaces being about twenty-five tons per day. Dufferin shaft (West mine), 375 feet; McClelland shaft, 360 feet; drained by Adit level to a depth of 200 feet. At East Mines, the workings are drained by an Adit level, cutting the ore-bed at a depth of 100 feet from the outcrop. Iron ore (red hematite 55 per cent.) is also brought from Torbrook, Annapolis County, and Limonite (40 to 48 per cent.) from Brookfield and East River, Pictou County. Limestone for flux is brought from Brookfield, 8 miles from Truro. At 1st September, 1890, preparations were being made to work the spathic ore at Londonderry. Gas kilns capable of roasting 250 tons per day have recently been erected, and the capacity of each furnace increased to 500 to 500 tons pig iron per week. From the Londonderry mines during the year ended 31st December, 1889, 3,351 tons of ore were raised; at Brookfield during the same period, 1,700 tons were extracted for the use of the Company; 156 tons from the mines of the New Glasgow Coal, Iron and Railway Company at Bridgeville were also used. A branch railway, three miles in length, connects the mines with the Intercolonial Railway at Londonderry station. The Company also owns and operates the Chignecto Colliery at Maccan, in Cumberland County. (For particulars see Cumberland Coal Mining Co.)

The following statistics of the company's production in 1889, have been kindly furnished by the Secretary.

PIG IRON.

One Furnace in blast 1889.	Quantity Manufactured	Value at furnace.
Total pig iron made.....	21,289 tons short.....	\$383,202
Total ore charged.....	54,161 ".....	97,807
Total fuel charged } Coke.....	33,289 ".....	94,791
} Raw coal.....	3,044 ".....	6,525
Total flux charged.....	19,922 ".....	19,709
Average force of men employed.....	80 men.....	

THE LONDONDERRY IRON CO.—Continued.

ROLLING MILLS AND FORGES.

Four re-heating furnaces. Three trains rolls.	Quantity Manufactured	Value at Mill.
Iron, all sorts, made during the year	7,284 tons short	\$273,150
Puddled bars consumed at works during the year	4,882 "	158,665
Scraps and all other iron consumed during the year	4,511 "	87,834
Total fuel consumed in the works during the year	5,792 "	
Average force of men employed	100 in addition to 200 shown on return below.	

IRON AND STEEL WORKS.

Number of furnaces in fire:—six double puddling, one single.	Quantity.	Value at Works.
Production of iron during the year	7,479 tons short	\$ 24,306
Consumption of pig iron during the year	8,073 "	145,314
“ iron ore “	3,031 "	6,090
“ fuel “	10,010 "	20,200

General Manager: R. G. Leckie, Londonderry, Nova Scotia.

West Mines: R. Boutelier, Supt.

East Mines: F. Park, Supt.

Chignecto Colliery: James Baird, Manager.

THE LOWER COVE STONE CO.

Incorporated 1889. Authorized Capital \$30,000, divided into 1,500 shares of \$20 each.

Directors:

Rufus S. Hubbarb,

Amos Seaman.

H. R. Wilnot.

Head Office: Lower Cove, Cumberland Co., N.S.

Formed to quarry, work and manufacture stone of all kinds in the Province of Nova Scotia.

THE MANITOBA RAILWAY & COAL CO.

Incorporated 1889. Capital \$500,000, divided into 5,000 shares of \$100 each.

Directors :

<i>President :</i> George H. Campbell, Winnipeg,	
G. R. Crow, Winnipeg, Man.,	Colin H. Campbell, Winnipeg, Man.
H. E. Crawford, Winnipeg, Man.,	W. A. Macdonald, Brandon, Man.

Head Office : H. E. Crawford, Secretary, Winnipeg, Man.

Formed to acquire and work coal lands in southern Manitoba, and to construct and operate a line of railway from the mines of the company to the town of Deloraine, and from thence to the city of Brandon, a distance of some seventy miles. The Company owns 2,000 acres in Township 1, Ranges 23 and 24, west of the principal meridian, in the Turtle Mountain district. Mining operations were first begun in the month of November, 1889, mainly of a prospecting nature. At a point about 17 miles s. w. of Deloraine, a number of test pits have been made, and a main shaft sunk to a depth of 60 feet, with drifts running in various directions for a distance of over 100 feet. In 1889, from 25 to 30 men were employed. Operations were temporarily suspended in 1890, pending negotiations with the Federal Government for a suitable land grant and other matters in connection with the construction of the Company's railway. The Company calculates to mine and ship a yearly output of from 40 to 50,000 tons, supplying purely Provincial trade. To 1st August, 1890, about \$10,000 had been expended on the property.

THE MEMPHRE MAGOG MINING CO.

Incorporated 1889. Capital \$50,000, divided into 500 shares of \$100 each.

Directors :

<i>President :</i> C. C. Smith, Newport, Vt.,	
Geo. E. Smith, Waterloo, Que.,	Lyman Libby, Dillinton, Que.,
Thos. Bell, Magog, Que.,	T. A. Knowlton, Waterloo, "
John Eade, Eastman, Que.	

Head Office : Thos. Bell, Secretary, Magog, Que.

Formed to acquire and work mineral lands in the Townships of Potton and Bolton, in the County of Brome, in the Province of Quebec. The Company owns some 150 acres in the Township of Potton, upon which development work was begun in 1889; about 2,000 tons of copper were estimated to have been raised in 1889. In 1890, a small force was employed sinking a shaft, etc. The Company will erect a smelting plant, but until this is done, very little ore will be mined.

THE MILTON PRESSED BRICK & TERRA COTTA CO. (Ltd.)

Incorporated 1890. Authorized Capital Stock \$50,000, divided into fifty shares of \$1,000 each.

Directors :

Dr. David Robertson.	
John S. McCannell,	Geo. William Booth,
William Booth,	John Cudmore.

Head Office : Milton, Ont.

THE MILTON P. B. & T. C. CO.—Continued.

Formed to manufacture and sell brick, terracotta, drain and sewer pipes, lime and quarrying stone; to purchase land for said purposes; to erect buildings thereon for manufactories and workmen's dwellings; to buy plant requisite for such manufactories, and generally to exercise all powers requisite to carry on the said business.

THE MINERAL EXPLORATION CO. (Ltd.)

Incorporated 17th April, 1889, by Act of the Legislature of Nova Scotia. Capital \$100,000, in shares of \$10 each.

Directors :

C. F. Fraser, Halifax, President.	
B. W. Chipmau,	A. Milne Fraser,
Col. C. J. Stewart,	Howard Clarke,

Head Office : A. Milne-Fraser, Secretary, 161 Hollis St., Halifax.

Formed to acquire, work and prospect mines and mineral lands in the Province of Nova Scotia.

THE MINUDIE MINING & TRANSPORTATION CO.

Capital Stock, \$100,000, in 5,000 shares of \$20 shares.

Directors :

Gilbert Seaman, Minudie, N.S.,	Job. H. Seaman, Barroufield, N. S.,
R. S. Hibbard, Lower Cove, N. S.	

Head Office : Gilbert Seaman, Sec.-Treas., River Hebert, N.S.

The Company holds, under lease from the Government of Nova Scotia, an area consisting of a square mile of coal land in Cumberland County, Nova Scotia, and is the owner of a small colliery at River Hebert located thereon. In 1889 the total production of coal amounted to 1,300 tons, of which 1,192 tons were "round" and 108 tons "slack." In July, 1890, owing to the death of two of the principal owners, mining operations were suspended and the colliery is now for sale.

THE MONTAWA GOLD MINE CO.

Incorporated 1890. Authorized Capital, \$24,000, in 2,400 shares of \$10 each.

Directors :

Edouard Guilbault,	
Adolphe Mangan,	Hon. J. A. Ouimet,
Joseph Henri Renaud,	Joseph A. Renaud,
Joseph Rivard,	Joseph H. Ostigny.

Head Office : Joliette, Que.

Formed to prospect and work for gold, silver and other minerals in the Province of Quebec.

THE NAPIER MINING CO. (Ltd.)

Incorporated 19th November, 1890. Authorized Capital \$120,000, divided into 1,200 shares of a value of \$100 each.

Directors :

Wm. J. Fraser, Halifax, N. S.
 Frederick Taylor, Lowell, Mass., | J. E. Hardman, M. E., Oldham, N. S.

Head Office : Oldham, N. S.

Formed for the purpose of purchasing, acquiring and owning of gold areas, timber and other lands; the development, exploitation, working and operation of gold mines, deposits carrying gold and associated metals, winning, raising and milling such metaliferous ores, selling and disposing of the gold and other metals produced thereupon.

**THE NATIONAL GAS & OIL CO. OF CANADA
(Limited).**

Incorporated 16th September, 1889. Capital Stock \$100,000 in 10,000 shares of \$10 each.

Directors :

John Atchison.
 John McArdle, | Wm. G. Wood,
 C. H. Delisle, | Mary A. Rourke.

Head Office : Windsor, Ont.

Formed for the manufacture and sale of fuel and illuminating gas, the construction and sale of the necessary apparatus used in the making of the said gas, also the manufacture and sale of menthol and other similar articles, to electroplate, and to acquire the necessary land, buildings and machinery therefor: also to acquire land by lease, purchase or otherwise, in the County of Essex, in the Province of Ontario, or elsewhere in the Dominion of Canada, on which to sink wells for gas or oil; also to construct the necessary appliances required in sinking said wells, and to manufacture tanks, pipes, valves, gauges and other appliances required for storing or conducting oil, artificial or natural gas, to enter into contracts for drilling wells, to purchase pipes, valves or other appliances to convey artificial or natural gas or oil by pipes through and along public highways to such place or places as may be necessary or as may be found practicable; to purify oil or gas, and to supply the same for heating, lighting or other purposes, and to use oil, artificial or natural gas, as fuel in the manufacture of bricks, tiles, glass and other articles, and generally to do everything necessary or incidental to the utilization of artificial or natural gas, or oil, for the purposes hereinbefore specified.

THE NEEBISH MINING CO.

Incorporated 25th March, 1875. Capital, \$600,000, in 60,000 shares of \$10 each.

Directors :

J. J. Vickers, Toronto, Ont., | Walter MacDermott, New York,
 Nicol Kingsmill, Toronto, Ont., | M. L. Sibley, Detroit.

Head Office : Toronto, Ont.

THE NEEBISH M. CO -Continued-

This Company was formed to acquire and work mineral location H 3, Township of Moss, near Jack Fish Lake, in the District of Thunder Bay, Ontario, containing 160 acres. Not in active operation, 1890.

THE NEW EUREKA SILVER MINING CO. (Ltd.)

Incorporated October, 1890. Authorized Capital, \$150,000, divided into 150,000 shares of a par value of \$1.

Directors :

Robt. P Rithet,
John Robson,

Hugh Nelson,
C. E. Pooley,

G. W. Hynes,
J. Heywood

Head Office : George A. Sargison, Secretary, 48 Langley Street,
Victoria, B.C.

Formed to acquire the Eureka mine, and all the other real and personal property of the Eureka Silver Mining Company, (Limited), situate near the town of Hope, in the district of Yale, in the Province of British Columbia, for the sum of \$80,000, to be paid for in fully paid up shares of the New Eureka Silver Mining Company, (Limited).

THE NEW VANCOUVER COAL MINING & LAND CO. (Ltd.)

Organized 1862, and reconstructed 30th January, 1889. The authorized Capital is £185,000 in shares of £1 each, all of which is issued and paid. There are also 6 per cent. debentures of £100 each (with two of £150) to the amount of £57,700, maturing at various dates, the interest being paid March 31st and September 30th.

Directors :

Chairman : J. Galworthy.

J. Fry,
W. Needham.

F. Tendron,
E. J. Woodhouse.

Head Office : J. Ramsden, Secretary, 12 Old Jewry Chambers, London, E.C.

Formed to acquire the properties of the Vancouver Mining and Land Company, Limited, formed in 1862. Accounts are made up to June 30th and December 31st, and submitted in November and May. No dividend was paid by the old company from 1881 to 1888, both inclusive, debenture interest, however, being met regularly. To June, 1885, there was £19,113 to debit of profit and loss, and by December, 1885, this was reduced to £14,635; by June, 1886, to £11,700; and by December, 1886, to £10,177. In May, 1887, there was a serious explosion at the colliery, entailing a direct loss of £11,066. Taking into consideration this debit the adverse balance brought forward was increased in the year 1887 to £20,985, after writing off for depreciation. In the half year to June 30, 1888, a profit was made sufficient, after providing for depreciation, to wipe out the debit brought forward, except £127. The old company paid a bonus of 20s. per share in April, 1889, and in June, 1889, the new company paid an interim dividend of 2½ per cent. Accounts to 20th June, 1890, showed a net profit for the half year of £7,462 3s. 9d. The total net output of coal for that period was 121,971 tons, and the sales were 128,390 tons. A further dividend was declared of £2 per cent. (out of the amount of profit transferred from the old company) payable on the 20th December, 1890, (free of Income Tax).

THE NEW VANCOUVER C. M. & L. CO.—Continued.

The company owns some 32,000 acres of freehold land, and operates the Nanaimo Collieries, Vancouver Island, British Columbia. The total output of coal for the year ended 31st December, 1889, amounted to 223,870 tons. Of this quantity 40,113 tons 11 cwt, were sold for home consumption; 179,286 tons were exported; and there were in stock on 1st January, 1890, 9,593 tons 1 cwt. Estimated value of plant, \$350,000. South Field No. 2, worked by slope, seam 6 to 10 feet; South Field No. 3, worked by shaft, seam 5 to 10 feet; No. 1 Esplanade shaft, worked by shaft, seam 5 to 12 feet; No. 1 North Field shaft, worked by shaft; seam four feet six inches. Railway to South Field, 5 miles with sidings; railway to No. 1 shaft, 1 mile with sidings; railway from North Field mine to wharf at Departure Bay, 4½ miles; rails are of steel, 56 pounds per yard of standard gauge, viz.: 4 feet 8½ inches; 8 hauling and pumping engines; 12 steam pumps; 4 locomotives; 150 coal cars (six tons), besides lumber and ballast cars; fitting shops for machinery repairs, with turning lathes, boring, drilling, planing, screw cutting machines, hydraulic press, steam hammer, etc., etc., diamond boring machinery for exploratory work (bores to 4000 feet); wharves, 1,070 feet frontage, at which ships of the largest size can load at all stages of the tide. The shafts at 1st September, 1890, had attained a depth of 70 feet, 420 feet, 610 feet and 610 feet respectively, and at 4th September, another shaft was sinking and had reached a depth of 114 feet. There are also three slopes at a depth on incline of 450 yards, 900 yards, and 1,100 yards respectively. The Company also owns and operates brick fields, stone quarries, etc., which, when in operation, employ about 40 men and boys.

Canadian Office: Samuel M. Robins, North Cor. Farquhar Street and Esplanade, Nanaimo, B. C.

Manager of Works: Wm. McGregor.

Agents in United States: J. Rosenfeld & Sons, San Francisco, Cal.

THE NORTH STAR MINING CO. (Ltd.)

Incorporated 1890, Capital Stock \$40,000, divided into 400 shares of \$100 each, of which to 1st September, 1890, \$20,000 had been subscribed and paid up.

Directors:

H. K. Fisher, Isaac's Harbor, N.S., *President.*

Roderick Macdonald, Halifax, N. S.,

Walter G. Brookfield, Halifax, N. S.,

Geo. Whitaker, Mason, N.H., U.S.A.,

Wm. H. Johnson, Halifax, N. S.,

W. M. Cameron, Halifax, N. S.,

G. W. Churchill, Hantsport, N. S.

Head Office: Frederick Macdonald, Treasurer, Halifax, N.S.

Formed to acquire, work and further develop gold areas, of which about 40 are held by the Company, in the Stormont district, in the County of Guysboro, Province of Nova Scotia. Present depth of workings 135 feet; openings on vein 270 feet. Plant: 20 H. P. engine, Burleigh air compressor, friction hoisting gear, 10 stamp mill, steam drills, etc. The company, only being organized late in the year, was not in active operation on 1st September, 1890, but arrangements were then being made to start work, and with this object in view the power of the mining plant will be doubled.

THE NOVA SCOTIA SYNDICATE (Ltd.)

Registered 1890. Authorized Capital, £12,000 stg., divided into 2,400 shares of £5 each, fully subscribed and paid up.

Directors :

Charles G. Palgrave,
Thos. Heathcote Ouchterlony,

E. J. Paine,
John E. deWolff.

Head Office : Lionel Woodhose, 155 Fenchurch Street, London, E. C., Eng.

Formed to acquire and work mines and mineral lands in the Province of Nova Scotia. The Company holds some 40 areas under lease from the Government of Nova Scotia, and is at present operating the old deWolff property, situate in the Waverley district, in the County of Halifax, in the Province of Nova Scotia.

Mine Superintendent : G. Macduff, Waverley, Halifax Co., N.S.

THE ONTARIO GOLD & IRON CO. (Ltd.)

Incorporated December, 1890. Authorized Capital \$100,000, divided into 1,000 shares of value of \$100 each.

Directors :

P. A. Peterson, Montreal
Charles R. Hosmer, Montreal,

H. C. Hammond, Toronto,
John McFee, Belleville, Ont.

Head Office : Malone, Ont.

Formed to acquire by purchase, exchange or otherwise, certain lands and estate situate in the Province of Ontario, and to hold, purchase, exchange, sell, lease, let or otherwise deal with, or dispose of, for cash or upon rentals, or for any other considerations, and which lands are proposed to be used for the purposes of mining therefrom gold and iron, and such other minerals as may be found therein or thereon.

THE OTTAWA BRICK MANUFACTURING CO. (Ltd.)

Incorporated 12th June, 1890. Authorized Capital \$45,000, divided into 1,800 shares of a value of \$25.

Directors :

A. Maclean,

Geo. H. Perley,
G. B. Green,

J. E. Askwith,
H. C. Monk.

Head Office : L. J. Burpee, Sec.-Treasurer, 22 Metcalfe St., Ottawa.

Formed to manufacture brick; terra cotta tiles, etc. The company's property is known as the Nicholson brick-yards, and consists of some 14 acres, situate at Hog's Back, in the Township of Nepean, Ottawa County, Province of Ontario. Brick-making was begun in October, 1890; a small force being employed.

THE PACIFIC BULLION MINING CO. (Ltd.)

Incorporated 13th March, 1889. Authorized Capital, \$1,000,000, divided into one million shares of the par value of one dollar each, and said Stock unassessable.

Directors :

John H. Stone,	L. C. Dillman, <i>President</i> ,	John F. Wolgamot,
W. B. Cowgill,		O. B. Nelson.

Head Office : W. B. Cowgill, Secretary, Spokane Falls, Wash., U. S. A.

Formed for the purpose of mining, milling, smelting and working ores and minerals contained in the mines known as the Spokane and Trinket, situate at Ainsworth, in West Kootenai mining district, in the Province of British Columbia. Spokane shaft, 91 feet deep; forty-five feet from surface levels have been sunk 60 feet north and fifty feet south. A tunnel has been run in on the Spokane vein for a distance of 200 feet, and will develop the Spokane vein to a depth of 200 feet below the outcrop of ore. There are also several minor workings on the property. Was not in operation in 1890, pending negotiations for a transfer of stock, which was not successful. Mining will be resumed in the spring of 1891.

THE PALGRAVE GOLD MINING CO)

Incorporated 30th January, 1889, under the laws of the State of Maine. Capital Stock \$100,000, its shares of \$1 each, of which to date \$85,000 has been subscribed and paid up.

Directors :

H. K. Fisher, Isaac's Harbor, N. S.	
T. R. Gue, Halifax, N. S.,	W. H. Harrington, Halifax, N. S.

Head Office : Portland, Maine.

Formed to acquire, work and further develop gold areas in the Province of Nova Scotia, of which 84 are held by the company in the Waverley district, Halifax County. Average number of men and boys employed, 45. Two shafts, 120 feet and 130 feet respectively; openings on vein 400 feet. At 1st September, 1890, arrangements were being made for the introduction of new machinery plant, including 10 stamp mill, etc., etc.

Mine Superintendent : Jas. McLellan, Waverley, Halifax Co., N. S.

THE PERRY CREEK GOLD MINING CO.

Incorporated 7th September, 1887. Capital Stock \$75,000, divided in 75,000 shares of \$1 each.

Directors :

Lt.-Col. Baker,	J. W. Powell,	D. R. Harris,
-- Snowdon,		-- Anderson,
Henry Jacoby,		-- Moss.

Head Office : Victoria, B. C.

THE PERRY CREEK G. M CO—Continued.

This Company is placer mining on Perry Creek East, at a point near Cranbrook, in the eastern division of the Kootenay mining district, in the Province of British Columbia. A tunnel has been driven at a depth of several hundred feet under Mount Cenis, and following the ancient bed of the stream, is now about 1,000 feet in. Most of the ground encountered presents the features of a canon, with the bed-rock, owing to the great rush of the waters, smooth and polished. Large boulders impeded the work, but wherever gravel and clay had lodged the ground was paying well. The company run cars on iron tracks in the tunnel, and they have machinery for driving pure air to the workings. The number of miners employed is from ten to fifteen, under a superintendent. The output for the year 1889 was valued at \$6,500, the gold assaying in San Francisco as high as \$18.50 per ounce. Up to the period when operations were suspended (June, 1890,) the official yield of gold dust amounted to \$9,000. Five miles higher up on the same creek the Company has sunk a shaft in the centre of the creek, 55 feet deep, and protected by a treble cofferdam. Having brought by pack animals, and partly on the backs of Indians, a powerful Cornish lift pump, of a total weight of 9,000 lbs, over a most inaccessible part of the country, it was placed in the shaft, which, by blasting through the solid bed-rock, had been deepened to 65 feet. Water was brought by a ditch and flume, and a large wheel in the latter, connected with the pump, kept the work clear. This consisted of drifts lengthwise and across the channel. Altogether about \$11,000 has been expended to date on these workings. Just before closing down some very coarse gold—one piece of $\frac{3}{4}$ oz.—was found in the sluice boxes. The last wash-up amounted to some 10 ounces; and 22 ounces from a previous wash-up, are deposited in the Bank of British Columbia at Victoria. At 1st November, 1890, efforts were being made to form an English Company.

Superintendent : Henry Dow, Cranbrook, Kootenay, B. C.

THE PHOSPHATE OF LIME CO. (Ltd.)

Registered 7th October, 1881. Capital, £50,000 stg., in 5,000 shares of £10 each. Of this amount £35,000 has been subscribed and £30,500 is paid up, 2,000 shares being fully up, and 1,500 having £7 paid. Accounts are made up annually to December 31st, and submitted in March, an interim dividend being paid in November. Reserve fund £1,000 formed out of the profits of 1883.

Directors :

Chairman : Augustus Abraham.

Thomas Fuller,
Sir J. H. Johnson,

Admiral B. C. Mayne, C.B.M.P.,
Charles Schiff.

Head Office : Westwood Richards, Secretary, Winchester House, Old Broad Street, London

The company owns and operates the High Rock phosphate mines in the township of Portland West, Ottawa County, Province of Quebec. The property, which covers some 600 acres, is situate on Lots 1 and 2 in the 8th Range, and Lots 5, 6 and 7 in 7th Range, in the township of Portland West, has been extensively developed, and has yielded on an average a little over 6,500 tons of phosphate per annum. The profits of the three years 1882-3-4 were sufficient to cover all outlays and to admit of a dividend of 25 per cent. on the Capital Stock, besides setting apart \$10,000 as a reserve. The mines are well equipped with commodious buildings for the miners, offices, stores, etc. An excellent plant consisting of Rand and Ingersoll compressors, steam hoisting and pumping gear, etc., is used. About 200 men and boys are employed at the mines and works.

THE PHOSPHATE OF LIME CO.—Continued.

The following returns of the exports from the High Rock mine are official :—

1883.....	4,500 tons.
1884.....	5,000 "
1885.....	5,732 "
1886.....	6,360 "
1887.....	5,686 "
1888.....	6,249 "
1889.....	6,054 "
1890.....	5,951 "

General Superintendent : Walter W. Pickford, High Rock Mines, High Rock, P. O., Que.

Canadian Agents : Wilson & Green, 30 St. Francois Xavier Street, Montreal, Que.

English Agents : Pickford & Winkfield, 148½ Fenchurch Street, London, E. C.

THE POPE MANGANESE CO.

Incorporated, 1889. Subscribed Capital \$75,000.

Directors :

Chas. H. Converse, Newton, Mass.

Alex. Pope, Boston, Mass.,

W. C. Pope, Boston, Mass.

Canadian Office : A. Markham, A.I.M.E., General Manager, Markhamville, N.E.

Formed to buy, sell, lease, own, manage mines and mining lands, property and machinery, and to mine and sell manganese and other ores, minerals and metals, and to do whatever may be necessary, therefore or incidental thereto. It controls 1,000 acres of land, situate in the parishes of Sussex and Hammond, in King's County, Province of New Brunswick. The output for 1890 is estimated to amount to 1,800 tons. All high class ores are shipped to company's headquarters at Boston, Mass., for distribution to Canadian and United States points. Furnace-ore shipped to Jersey City, for use of Pennsylvania steel-makers. Fifty-four men and boys employed in 1890.

THE PORTLAND ASBESTOS MINING CO.

A private Company, organized in 1890.

Owners :

W. A. Allan, Ottawa,

R. A. Allan, Montreal.

Head Office : Victoria Chambers, Wellington St., Ottawa, Ont.

Formed to acquire, work and further develop an Asbestos property, consisting of Lots 15 and 16, in the 5th Range of the Township of Portland West, in the County of Ottawa, Province of Ontario. A small force employed in preliminary workings during 1890.

THE PROVINCIAL NATURAL GAS & FUEL CO. OF ONTARIO (Ltd.)

Incorporated, 1890, under letters patent from the Federal Government of Canada. The nominal Capital Stock is \$500,000, in shares of \$100 each, of which to 31st August, 1890, \$252,000 have been subscribed and paid. It is proposed to increase this amount to \$1,000,000.

Directors :

Peter Maclaren, Perth, Ont., President.	
N. A. Coste, Amherstburg,	John F. Wood, M.P., Brockville,
E. M. Coste, Toronto,	Loftus Cuddy, Amherstburg.
D. McGillivray, Amherstburg.	Joseph Kavanagh, Ottawa.

Head Office : Union Loan Buildings, Toronto St., Toronto, E. M. Coste
M. E., Managing Director.

The Company holds some 50,000 acres under lease in the County of Welland, Ont. To 1st August, 1890, twelve wells had been drilled, yielding a estimated flow of 25,000,000 cubic feet per diem. At that date the Company had under consideration the construction of a pipe line to the Town of St. Catherines, Ont., and to the City of Buffalo, in the State of New York, U.S.A. The annual meeting is held in June.

THE QUEEN'S & SUNBURY COAL & IRON MINING CO.

Incorporated 11th April, 1872. Capital Stock, \$25,000, divided into 25 shares of \$1,000 each.

Directors :

Archibald Harrison, Mangerville, N.B.,	
Cabel W. Wetmore, St. John, N.B.,	Charles Burpee, Sheffield, N.B.

Head Office : Canning, Queen's County, N.B.

This Company was formed to mine coal and iron ore and manufacture iron and for purchasing, leasing, taking leases of, or selling mines or real estate necessary for these purposes, or either of them, and establishing all necessary works therewith connected, and for the convenient carrying on and managing same.

THE RAND DRILL CO. (Ltd.)

Incorporated 26th October, 1888. Authorized Capital \$12,000, divided into 600 shares of a value of \$20 each.

Directors :

Edward Rand,	
Charles R. Rand,	Edward D. Rand.

Head Office : Vancouver, B.C.

Formed for boring or drilling for water, coal, salt, petroleum, natural gas, or for testing mineral veins or lands, and business associated and incidental and conducive to such purposes.

THE RICHMOND SLATE QUARRYING & MANUFACTURING & ASBESTOS CO. (Ltd.)

Incorporated, 1890. Authorized Capital \$150,000, divided into 3,000 shares of a value of \$50 each.

Directors :

Thomas Logan,	John C. Bedard,	W. E. Jones,
John W. Jones,	|	L. Jutras.

Head Office : W. E. Jones, Secretary, Richmond, Que.

Formed to acquire, work and further develop the Richmond Slate Quarry and other property, situate on Lots 5 and 6, in the 11th and 15th Ranges of the Township of Cleveland, in the County of Richmond, Province of Quebec, containing in all five hundred and eighty acres. The property is located at a point three miles from the Town of Richmond, and is situated directly on the main line of the Grand Trunk Railway, which has a side track for loading and unloading within a quarter mile from the Quarry. Several good buildings have been erected, together with machinery for quarrying the slate, including 30 h. p. engine and boiler for hoisting and pumping purposes. 20 men employed.

Superintendent : J. C. Bedard, Richmond, Que.

THE ROCKLAND GOLD MINING & MILLING CO.

Sole Owner : H. K. Fisher, Isaacs Habor, N.S.

The property acquired by Mr. Fisher was formerly owned and operated by the Gallihar Gold Mining and Milling Co., and is situated in the Stormont district, Queen's County, in the Province of Nova Scotia. Only prospecting work done lately. The stamp mill, however, does a good deal of crushing for adjacent mines.

THE ROYAL GOLD MINING CO.

Incorporated January, 1891. Authorized Capital Stock, \$50,000.

Directors :

A. Curtis, Boston,	Charles Brown, Boston,	G. W. Johnson, Yarmouth,
J. E. Cushing, Caledonia,	|	Thos. Parker, Caledonia.

Head Office : Whiteburn, Queen's Co., N.S.

Formed to mine and smelt gold ores, etc., in the Province of Nova Scotia.

THE SAANICH LIME CO. (Ltd.)

Incorporated April, 1890. Capital, \$50,000, in shares of \$100 each.

Trustees:

Joseph Wriglesworth, | Wm. Fernie, | Peter C. Fernie,

Head Office: Victoria, B.C.

Formed to acquire by purchase, operate and carry on, and extend the lime-kilns situate on Tod Creek and Highland district, now being carried on at the above-named places, and the purchase of other lands on Vancouver Island, or in the Province of British Columbia.

THE SALT SPRING ISLAND MINING CO. (Ltd.)

Incorporated 6th May, 1889. Authorized Capital \$40,000, divided into 8,000 shares of a value of \$5 each.

Directors:

John Braden,	|	Henry Brethour,
J. Brethour,	|	L. Dickinson,
J. L. Stamford,	|	Julius Brethour.

Head Office: L. Dickenson, Secretary, 113 Douglas Street, Victoria, B.C.

Formed to work and develop mines, and acquire lands, water rights, &c., on Salt Spring Island and to do all acts and things requisite or convenient for effecting the purposes aforesaid. The time of the existence of this Company is fixed at forty-nine years.

The property owned by the company consists of some twenty-one acres of mineral lands, situate on Salt Spring Island, Province of British Columbia.

During 1890 a small force (6 men) was at work doing preliminary work. Machinery will be put in in the spring of '91, when more extended operations will be commenced.

Superintendent: H. Eden.

THE STAIR COAL MINING & MANUFACTURING CO. (Ltd.)

Incorporated 11th August, 1889. Authorised Capital \$500,000, divided into 5,000 shares of a value of \$100 each.

Directors:

<i>President:</i> James Baylis, Montreal,	|	S. M. Baylis,
George S. Wait,	|	John Lamb.

Head Office: S. M. Baylis, Secretary, 1837 Notre Dame St., Montreal, Que.

The charter of this corporation grants to it all the rights and powers given by the "Canada Joint Stock Companies Act of 1877," and the following powers as set forth in said charter: (1.) The purchase and sale of coal, mineral and other lands near Stair, in the district of Assiniboia, in the North-West Territories, and especially in Township 13, Range 6, west of the fourth principal meridian; and the working of the said mines, the quarrying of stone, the manufacture of bricks and iron, the purchase, erection, and operation of flour mills, and the transportation and sale of the products

THE STAIR C. M & M. CO.—Continued.

thereof; the purchase, construction, maintenance and operation of all works for, and the employment of all suitable means of transportation of the products of the same, whether by land or by water, etc. The properties of the Company are as follows: (1) Ownership in fee simple, with all mineral rights of one section, No. 8, in Range 6, west of the fourth principal meridian, containing 640 acres. (2.) Ownership in fee simple of one-half section 7, in Range 6, west of the fourth principal meridian, containing 305 acres. (3.) The coal mine and seams of coal, with openings and drifts, well timbered and drained, with over 2,000 feet of tramways laid thereon. (4.) Incline plane with culverts and bridges in good order to the level, with staging, dump, screens, and scales. (5.) 36 H.P. engine and pump, with cables and all appliances. (6.) Coal waggons, trucks, miners' tools, etc. (7.) Blacksmith's shop, with all necessary equipment. (8.) 1½ miles of railway, standard gauge, connectin the mines with the main line of the C. P. R. The buildings include a boarding-house for 100 men; six small frame dwellings for foremen; 5 or 6 dug-outs for men; stables; storehouse, 23 x 60; magazine, etc., etc. The Company's lands are situated at a point about six miles west of the town of Medicine Hat. Two seams, one of four feet six inches, and the other six feet in thickness. Coal from the mines has been largely used by the Canadian Pacific Railway and towns along the line from Calgary to Winnipeg, when, at one time, the mine was worked up to 200 tons a day, under the former owners, who suspended operations in 1885 for want of capital. The total production up to 1st October, 1890, has been about 10,000 tons. An analysis made by Prof. J. T. Donald gave:—

Moisture	6.38 per cent.
Volatile combustible matter	33.00 “
Fixed carbon	56.12 “
Ash	4.50 — 100.

Yields a firm coherent coke.”

The coal can be dumped into the C. P. P. cars at a cost of from \$1 to \$150 per ton of 2,000 lbs. according to the quantity put out, the net cash selling price at the dump f. o. b. is \$2.25 to \$2.75, according to the quantity taken.

All lands, plant, stock, merchandise, cattle, buildings and movables are paid for, with the exception of the two small mortgages of \$7,000 and \$11,300, and bills payable, \$7,500, in all \$25,800, which the company assume and issue for the whole, \$400,000 in paid up stock or shares of the company, leaving in the treasury \$100,000 unsold stock at 1st October, 1890.

Debentures for \$100,000, bearing interest at 6 per cent. per annum, payable half yearly, are being issued, as authorized by the general meeting of shareholders.

THE STANDARD OIL & GAS CO. OF ONTARIO.

Incorporated 1890. Authorized Capital Stock \$1,000,000, divided into 10,000 shares of \$100 each.

Directors :

Elijah K. Barnsdale,
Wm. Smith Dingman,
James Hodd,
James Pitt Mabee,
James John Stock,
Andrew Waddell,

James Barker.

Andrew Jackson Clark,
James Dow,
Edward J. Kneith,
William Mowat,
John Trow,
Benjamin Franklin Youngs.

Head Office : Alex. Dow, Secretary, 19 Wellington Street, Stratford, Ont.

Formed to acquire the right to bore or dig for natural gas, petroleum, or other mineral substances, or water; to acquire leases granting such privileges to the com-

THE STANDARD O. & G. CO.—Continued.

pany or their servants ; to purchase or lease land, machinery, or appliances of any and all kinds for the purpose of carrying on the business of boring for gas, oil or other mineral substance, or water ; to construct pipe lines for the conveyance of gas, oil or water to all or any places within Ontario or elsewhere, etc. The company at 15th December, 1890, held under lease between five and six thousand acres of land at, or near, the town of Stratford, in the Province of Ontario. Not fully organized December, 1890.

THE STYLES MINING CO. (Ltd.)

Incorporated 1874. Capital Stock, \$500,000, divided into shares of \$50 each, of which to date \$300,000 has been subscribed and paid up.

Directors :

Lt.-Col. Chas. J. Stewart, Halifax, N.S., *President*,
 Hon. Judge Townshend, Halifax, N.S., | J. S. Hickman, Amherst, N.S.,
 J. Robson Lamy, Amherst, N.S.

Head Office : J. N. Sharp, (Interim Sec.), Amherst, N. S.

This Company holds under lease some five square miles of coal areas at Stanley, Cumberland County, Province of Nova Scotia. Mr. John Rutherford, formerly inspector of mines for the Province, reports on the property as follows :—

“With respect to the seams of coal on the ‘Styles’ property ; as I have personally examined those that have been opened, I can speak with confidence as regards their general character. I have subjected the coal from two of the seams to practical test, and I find the quality of the coal excellent. It possesses great heating properties, is fairly free from sulphur, leaves a reddish ash of moderate proportion, and can be worked of merchantable size. Another feature of importance in view of the prospective development of the iron industry in Nova Scotia, is its adaptation to the production of coke. I submitted some of the coal to experimental trial in a coke oven, and I was pleased to have as the result a clean, compact and strong-looking coke.” Present depth of shafts : “Robinson,” 70 feet, vertical ; Robinson Slope, 137 feet ; West Slope, 140 feet ; Levels, 350 feet in aggregate to date. About 400 tons raised to date. Colliery not in operation in 1890.

THE SUDBURY MINING CO. (Ltd.)

Incorporated 28th December, 1888. Capital Stock \$100,000, in 10,000 shares of \$10 each, payable 25% on allotment, 25% in thirty days, and balance on call of not less than thirty days.

Directors :

Joseph Couzens, Sault St. Marie, Ont.,
 Robt. McLain, Toronto, | Alexander Mackie, Toronto,
 George Dunstan, Toronto, | Lt.-Col. G. A. Shaw, “

Head Office : Geo. Dunstan, Sec.-Treasurer, 104 Bay St., Toronto, Ont.

Formed to acquire and work the north half of lot 6, 3rd Concession, Township of Denison, in the Province of Ontario, consisting of 160 acres. Some prospecting was done in 1889, but no active mining operations were in force in 1890.

THE SYDENHAM MICA & MINING CO.

Incorporated 10th May, 1889. Capital Stock, \$250,000.
President: Isaiah Smith, Sydenham, Ont.

Head Office: Jonathan P. Lacey, Sec.-Treas., Sydenham, Ont.

This Company acquired the mineral properties formerly owned and operated by Messrs. Isaiah Smith & Co., of Sydenham, and now carry on the business of miners, shippers and dealers in mica, phosphate and other minerals. The Company operates the Eel Lake and other mines in the Township of Loughboro, Ontario. Men employed at mines and works, from 20 to 30.

THE SYDNEY & LOUISBURG COAL & R'Y CO. (Ltd)

Registered 13th April, 1880. The Capital consists of £50,000 in 10 per cent. cumulative first preference shares of £10, with £30,000, or £6 per share, called up; £14,560 in fully paid 6 per cent. non-cumulative second preference shares of £10, and £250,000 in fully-paid ordinary shares of \$10. After the full preferential dividends have been paid; two-thirds of the balance of net profits are to go to the ordinary shareholders; and one third to the first preference shareholders.

Directors:

J. G. Mills, | G. W. Medley, | B. H. Schröder.
C. J. Russell, |

Head Office: W. Roland Hart, Secretary, 43 Lothbury, London, E.C., Eng.

The Company holds under lease and otherwise controls an area of ten square miles of coal lands in the County of Cape Breton, in the Province of Nova Scotia, and operates the Schooner Pond, Lorway, Emery and Reserve collieries, situated thereon. The total production of coal from these collieries for the year ended 31st December, 1889, as per returns kindly furnished by the Company, amounted in the aggregate to 121,966 tons, distributed as follows:—

COAL SALES—1889.	
To Nova Scotia.....	17,630 tons.
“ New Brunswick.....	1,982 “
“ Prince Edward Island.....	2,885 “
“ Quebec.....	60,570 “
“ Newfoundland.....	6,539 “
“ United States.....	6,672 “
“ Other ports.....	12,978 “
“ Colliery employees and engines.....	12,710 “
Total sales 1889.....	121,966 “

408 persons employed above and below ground. Slopes:—French: 3,234 ft., dip 1 in 4; Main: 2,466 ft., dip 1 in 24; Emery: 850 ft., dip 1 in 12. Average seam:—Reserve 6 ft.; Emery, 5 ft. Accounts to December 31st submitted in June. The following is an extract from the report of the directors, submitted at the Eleventh Ordinary General Meeting of the Company on the 23rd June, 1890:—“The Directors are glad to be able to report that the year's working shows a profit of £5,118 18s. 2d.; and that, after deducting therefrom £1,500, written off for depreciation, there remains a balance of £3,618 18s. 2d., which has been carried to the credit of Profit and Loss account. At the date of the last General Meeting, the balance to the credit of Profit and Loss account was £2,720 7s., out of which, in November last, an interim dividend was paid on the first preference shares of £1,500, leaving a balance in hand of £1,220 7s. Adding this sum to £3,618 18s. 2d., the net profit for 1889, there remains an available sum of £4,839 5s. 2d.

THE SYDNEY & L. C & R. CO.—Continued.

Dr.		Cr.	
£	s. d.	£	s. d.
To Capital—			
5,000 First Preference Shares of £10 each.....	50,000 0 0		
Less £4 per Share not called	20,000 0 0		
		30,000 0 0	
NOTE—Interest on these Shares to 31st Dec., 1884, amounts to.....	£3,000		
Ditto ditto to 31st Dec., 1885	3,000		
Ditto ditto to 31st Dec., 1886	3,000		
Ditto ditto to 31st Dec., 1887	3,000		
Ditto ditto to 31st Dec., 1888	3,000		
Ditto ditto to 31st Dec., 1889	3,000		
1,477 Second Preference Shares of £10 each.....	14,770 0 0		
21 not issued.....	210 0 0		
		14,560 0 0	
<u>1,456</u>			
25,000 Ordinary Shares of £10 each, fully paid.....		250,000 0 0	
		294,560 0 0	
		1,213 9 8	
		31 18 4	
“ Sundry Creditors.....			
“ Dividend Warrants unclaimed			
“ Profit and Loss Account—			
Balance at 31st Dec., 1888.....	2,720 7 0		
Less Dividend paid.....	1,500 0 0		
Balance from Revenue Account	1,220 7 0		
	3,618 18 2	4,839 5 2	
		<u>£300,644 13 2</u>	
By Cost of Property, as per last Balance Sheet.....		286,414 13 11	
“ Expenditure in opening up Emery Seam (Stone Drift), As per last Balance Sheet..		2,735 5 7	
		289,149 19 6	
Additions during the year 1889		1,042 10 2	
		290,192 9 8	
Less Depreciation.....		1,500 0 0	
		288,692 9 8	
“ Stores in the Warehouse unused		886 12 4	
“ Oats and Hay on hand.....		228 2 4	
“ Coal on hand.....		319 14 6	
“ Sundry Debtors.....		790 2 8	
“ Fire Insurance expired.....		100 0 0	
“ Office Furniture, London.....		40 0 0	
“ Claim against an official of the Company (amount not yet ascertained) action pending in Nova Scotia.....			
“ Cash at Bank and in hand.....		9,587 11 8	
		<u>£300,644 13 2</u>	

THE SYDNEY & L. C. & R. CO.—Continued.

REVENUE ACCOUNT, 1st January to 31st December, 1889.

£r.

	£	s.	d.	£	s.	d.
To Coal on hand at 1st January, 1889.....	245	0	0	32,900	16	8
“ Colliery and Railway Expenses and Royalty.....	25,940	2	3	56	10	8
“ General Expenses, Cape Breton.....	2,012	6	4	302	6	8
“ General Expenses, London, viz.:				468	15	0
Directors’ Fees and Managing Salaries.....	600	0	0	32	7	2
Salaries.....	185	0	0	0	10	0
Rent of Offices.....	24	0	0	70	4	8
Audit Fee.....	21	0	0	100	2	11
Telegrams and Petties.....	25	10	9	319	14	6
Printing and Stationery.....	8	7	10	228	2	4
Law Costs.....	51	5	6			
Income Tax.....	9	17	6			
“ Hay and Oats purchased.....	925	1	7			
“ Depreciation on Office Furniture (London).....	228	2	4			
“ Depreciation on property.....	1,500	0	0			
“ Balance to Balance Sheet.....	3,618	18	2			
	<hr/>			£34,479	10	8
By Coal Account.....						
“ Goods Traffic Receipts.....						
“ Passenger Traffic Receipts.....						
“ Rents.....						
“ Pier and Shipping Charges.....						
“ Transfer Fees.....						
“ Interest.....						
“ Bad Debts Recovered.....						
“ Coal on hand at 31st December, 1889.....						
“ Hay and Oats on hand at 31st December, 1889..						
				£34,479	10	8

Out of the profits of 1889, a dividend of 12s. per Share, equal to 10 per cent. on the amount paid up on the 5000 First Preference Shares was paid, which would absorb £3,000, leaving a balance of £1,839 5s. 2d. placed to reserve.

General Manager : D. J. Kennelly, Sydney, C.B., Nova Scotia.

Over Ground Manager : James McVay.

Under Ground Managers : Thompson Fletcher and Samuel Lee.

THE TEMPLETON & BLANCHE RIVER PHOSPHATE & MINING CO. (Ltd.)

Incorporated 1887 under Letters Patent from the Legislature of the Province of Quebec. Capital Stock \$30,000, in shares of \$100 each, of which to date \$25,000 has been subscribed and paid up.

Directors :

<i>President</i> : Wm. Cassils, Montreal.	
R. P. McLea, Montreal,	A. Holden, Montreal,
Henry Hogan " "	Dickson, Anderson, Montreal,
Hugh Graham " "	J. M. Kirk, Montreal.

Head Office : Dickson Anderson, Managing Director, Montreal.

Formed to acquire and work phosphate lands in the Province of Quebec, particularly certain areas in the 9th, 10th and 11th Ranges of East Templeton, Que. Some development work was done in 1887 and 1888, but in the latter year operations were suspended. The property is at present being worked by Messrs. Lomer, Rohr & Co., Custom House Square, Montreal, under agreement with the company.

THE TEXADA LIME CO.

Incorporated 9th July, 1889. Authorized Capital \$20,000, divided into 400 shares of a value of \$50 each.

Directors :

Thomas H. Lee,	
Donald Menzies,	Robt. Mathison, Jr.

Head Office : Vancouver, B.C.

Formed to erect and maintain kilns, wharves and store-houses on Texada Island; and to quarry lime, stone, and the making composing, preparing, selling and disposing of lime and cement, etc.

THE TEXADA MINING CO. (Ltd.)

Incorporated 7th February, 1889 Authorized Capital \$10,000, divided into one hundred shares of a value of \$100 each.

Directors :

Calvin R. Miller,	Richard Prouse,	John Ellery Jenkins.
-------------------	-----------------	----------------------

Head Office : Nanaimo, B.C.

Formed to carry on the general business of miners by working all or any of the mines or minerals, and exercising the mineral rights acquired by the company in the following mineral claims : -The War Eagle mineral claim, Devon Great Consols, Paradise, Western Slope, Dalkeith Alma, Silver Tip, Blue Bird, Golden Chariot, Yellow Jacket, Big Bonanza, Bob Tail, Ada, The Old Flag, John Pawson, Victoria, Richard R. Prouse, Western Star, You Bet, Caledonian, Golden Slipper, C. R. Miller, British Queen, Jim Crow, Prince of Wales; and also any other mining claims, mines or minerals, etc.

THE THETFORD ASBESTOS MINING CO.

Incorporated March, 1889, under Letters Patent from the Government of the Province of Quebec. Capital Stock \$200,000 in shares of \$100 each, fully subscribed and paid up.

Directors :

W. S. Patterson, Montreal, J. T. Wilson, Montreal,	A. H. Murphy, Montreal, Que., |	George Irvine, Quebec, J. C. Eno, Quebec.
---	-----------------------------------	--

Head Office : Thetford, Que.

The Company owns Lots 30 and 31 in Range A, Lots 32 in Range B, and Lot 28 in the 6th Range, all in the Township of Coleraine, Province of Quebec, in all about 500 acres of mineral bearing lands.

THE THUNDER BAY LAND & MINING CO.

Incorporated under Letters Patent from the Ontario Government 11th December, 1883. Capital Stock \$40,000, in shares of \$1 each, of which \$37,512 has been subscribed and paid up.

Directors :

<i>President</i> : Hon. Geo. A. Drummond, Montreal.		
Francis Stephen, Vice-Pres., Sir Donald A. Smith,	|	Sir George Stephen, Bart., John Turnbull.

Head Office : Ottawa, Ont. ; Robt. Turnbull, Secretary, P.O. Drawer 2,132, Montreal.

This company owns some 1,700 acres of mineral lands in the Thunder Bay district, in the Province of Ontario, formerly the property of the Thunder Bay Silver Mining Company, and worked by them for several years. A considerable amount of capital was spent on plant and buildings during a period when no railway communication existed, but the promoters evidently became discouraged, for they abandoned operations before the property was to any extent developed. The present owners, who were also in the first company, are now seeking a purchaser for the property, and no mining operations are at present going on.

THE TILT COVE COPPER CO. (Ltd).

Registered 4th April, 1888. Capital £160,000, in 80,000 shares of £2 each, all of which have been allotted and fully paid up. The consideration for the property was £140,000, payable in fully paid shares, and £80,000 in debentures bearing 5½% interest.

Committee of Management :

J. C. Leaver, Thos. Cory,	John Taylor, |	Col. J. W. Young, Richard Francis.
------------------------------	------------------	---------------------------------------

Head Office : 9 Queen Street Place, London. E.C., Eng.

THE TILT COVE COPPER CO.—Continued.

Formed for the purpose of adopting an agreement made between the vendors and the Company for acquiring the copper and other mineral properties at Tilt Cove, Newfoundland. Annual reports are issued to 31st March and submitted in November. In March, 1890, the properties were leased for 99 years to the Cape Copper Mining Company, Limited, at a rent of £4,400. The Cape Copper Company advance £15,000 at 5 per cent. interest, and when this is repaid out of profits, surplus profits are to be divided equally between the Cape Copper Company and the Tilt Cove Company. The lease may be discontinued by the Cape Copper Company at any time on twelve months' notice.

THE TORONTO IRON CO.

Incorporated 12th September, 1889. Authorized Capital \$1,000,000, divided into 10,000 shares of a value of \$100 each.

Directors :

M. F. Brown, Toronto,	Charles J. Pusey, Irondale, Ont.,	Giles H. Williams, Toronto
Thos. Shortiss, Toronto,		A. F. Wood, Madoc.

Head Office : Chas. J. Pusey, Managing Director, Irondale, Ont.

Formed to take over the property formerly owned and operated by the Bancroft Iron Company, containing in all about 1,000 acres and situate at Irondale, County of Haliburton, in the Province of Ontario. Only preliminary work has been done, and trial shipments made.

THE TORONTO MINING CO. OF SUGAR CREEK.

Head Office : Dr. Hugh Watt, Secretary, Barkerville, B.C.

Formed to acquire and work alluvial ground formerly owned and operated by the Sugar Creek Hydraulic Mining Company, and situate on Sugar Creek, in the district of Cariboo, in the Province of British Columbia. A small force employed.

Superintendent : Robert Wyllie, Sugar Creek, Cariboo, B.C.

THE TUMBO ISLAND COAL MINING CO.

A private company consisting of the following

Owners :

W. P. Sayward,	F. W. Foster,
T. B. Hall,	Chas. Gabriel.

Head Office : Chas. Gabriel, Secretary, Tumbo Island, via Plumper Pass, Mayne Island, B.C.

This Company has been formed to prospect and work for coal on Tumbo Island, lying at the southeast entrance of the Straits of Georgia. Operations were commenced

THE TUMBO ISLAND COAL CO -Continued-

in 1889, during which period a shaft to a depth of 600 feet was sunk; but too much water was encountered and the working at this point was abandoned. At September, 1890, boring was being continued on other portions of the property. 20 men employed. The mine is equipped with steam engine, pit-head gear and other appliances.

THE UNITED ASBESTOS CO. (Ltd.)

Registered 1st November, 1880. The Capital is £100,000, in fully paid ordinary shares of £10 each, and £100,000 in fully paid deferred shares of £10.

Directors :

H. A. Allport,	J. J. Allport, <i>Chairman</i> ,		
D. S. Cargill,	E. Elias,	E. Gellatly,	P. Hurse.
	A. D. Furse,	J. R. Heron-Maxwell,	

Head Office : J. A. Fisher, Sec., Dock House, Billiter Street, London, E.C., Eng.

This Company purchased in 1889 the property formerly owned and operated by the Frechette Mining Company, at Black Lake, in the County of Megantic, Que. The property consists of 75 acres of Asbestos lands, and the purchasing consideration was \$70,000. 80 men employed. Well equipped with machinery, plant, buildings, etc.

Mine Superintendent : John J. Penhale, Black Lake, Que.

THE VANCOUVER BRICK & TILE CO.

Incorporated 15th April, 1887. Authorized Capital \$25,000, divided into 250 shares of a value of \$100 each.

Directors :

	David Oppenheimer.	
Isaac Oppenheimer,		Samuel Brighthouse,
George Black,		W. H. Armstrong.

Head Office : M. B. Wilkinson, Secretary, Vancouver, B.C.

Formed for the purpose of manufacturing bricks, tiles, vetrified pipes, sewer pipes, drain pipes, lime, cement, etc. Property consists of 20 acres. 750,000 bricks were made in 1889, but nothing was done in 1890.

THE VANCOUVER ENTERPRISE MINING CO. (Ltd)

Incorporated 8th March, 1889. Authorized Capital \$25,000, divided into 250 shares of \$100 each.

Directors :

	Malcolm McLeod,	
John M. Stewart,		R. A. Anderson,
A. H. Cameron,		J. W. Robinson,
Wm. Cargill,		R. E. Palmer,
	William Sloan.	

Head Office : J. W. Robinson, Secretary, Vancouver, B.C.

THE VANCOUVER ENTERPRISE CO.—Continued.

Formed to acquire and work lodes and veins of gold and silver bearing quartz, and alluvial deposits of gold and other minerals, except coal, on Cayoosh Creek, in the Province of British Columbia.

THE VANCOUVER SAN JUAN LIME CO. (Ltd.)

Incorporated 24th January, 1887. Authorized Capital \$30,000, divided into 600 shares of a value of \$50 each.

Directors :

John M. Spinks, | Robert W. Gordon | Francis L. Carter Cotton.

Head Office : Vancouver, B.C.

Formed to erect and maintain kilns, wharves and storehouses on the shores of False Creek and Burrard Islet, and for the purpose of manufacturing lime in the city of Vancouver, Province of British Columbia.

THE VANCOUVER SMELTING & MINING CO. (Limited.)

Incorporated November, 1890. Authorized Capital Stock \$250,000, divided into 10,000 shares of \$25 each.

Directors :

Henry T. Ceperley, | David Oppenheimer, | Thomas Dunn,
Henry McKee, | George de Wolff.

Head Office : Vancouver, B.C.

Formed to carry on the business of smelters, refiners, founders, assayers, dealers in bullion, metals and products of smelting of every nature and description; to carry on the business of miners, and to obtain by purchase or otherwise, mine and work ores, minerals and metallic substances and compounds of all kinds.

THE VICTORIA HYDRAULIC MINING CO. (Ltd.)

Incorporated October 1890. Authorized Capital \$100,000, divided into 100,000 shares of \$1 each.

Directors :

Wm. Wilson, | T. J. Jones,
D. E. Campbell, | W. P. Sayward.

Head Office : Victoria, B.C.

THE VICTORIA HYDRAULIC CO.—Continued.

Formed to acquire and work for gold and other minerals, two parcels of land containing 320 acres, situate on the South Fork of the Quesnelle River, in the district of Cariboo, Province of British Columbia.

THE WILLOW RIVER GOLD MINING CO. (Ltd.)

Incorporated 1st May, 1889. Authorised Capital \$25,000, divided into 1,000 shares of a value of \$25 each.

Directors :

Thornton Fell,	|	Moses C. Ireland.
----------------	--	-------------------

Morris Moss.

Head Office : Victoria, B. C.

Formed to mine gravel, sand and quartz for precious stones in the Province of British Columbia.

THE WINDSOR GOLD CO. (Ltd.)

Incorporated October, 1890. Authorised Capital \$100,000, divided into 40,000 shares of a value of \$2.50 per share.

Directors :

J. H. Harding, St. John, N. B.,	|	W. R. Stockbridge, Boston, Mass.,
D. W. Clarke, St. John, N. B.,	|	Gideon Havenor, St. John, N. B.,
Henry G. Hardy, Boston.		

Head Office : St. John, N. B.

Formed to purchase, work and develop gold mines and other mining properties ; to prospect, negotiate for, take up, license or lease, acquire, buy and sell the same, and to do a general mining business.

**UNION COLLIERY CO. OF BRITISH COLUMBIA
(Limited.)**

Incorporated 25th July, 1888. Authorised Capital \$1,000,000, divided into 10,000 shares of a value of \$100 each.

Directors :

Robert Dunsmuir,	|	James Bryden.
------------------	--	---------------

Head Office : Comox, B. C.

UNION COLLIERY CO—Continued.

This Company owns and operates the Union Colliery, near Comox, on Vancouver Island, British Columbia. The total output of coal from the pits of the Company for the year ending 31st December, 1889, amounted to 31,204 tons. Of this quantity 23,790 tons were exported, and 100 tons were sold for home consumption; 314 men were employed during the same period. Estimated value of plant \$25,000. One slope with airways and levels; eleven miles of railway, 4 ft. 3½ inches gauge; 2 locomotives, 50 coal waggons, 1 diamond drill, 4 engines, 2 steam pumps, 2 wharves, 1 steam saw mill. The following is an analysis of a sample of the coal by Dr. Harrington:—

Hygroscopic water	1'70
Volatile combustible matter.....	27'17
Fixed carbon	68'27
Ash	2'86
	100'00

In his official report for 1888, Mr. Archibald Dick, Inspector of Mines, describes the operations at these mines as follows:—The district of Comox, for many years back has been supposed to be rich in coal, but there was little done to prove it until the Union Colliery Company commenced operations last spring, and started to open out the coal measures there, with the view of establishing a successful colliery. They found the coal, and in the outcrop they started levels in two places, with airways going parallel to and only a few yards from them. These levels were drifted in for about 500 feet, and for nearly all that distance the coal is good and very hard, and will average fully 3 feet in thickness, but at this point the levels were stopped until the railway could be completed. The mining operations were, however, by no means stopped, as attention was turned to another place about 800 yards from the above mentioned levels, where they set about exploring for a lower seam of coal which was known to be below them, and this seam they succeeded in finding. In the first place they sank a shaft and ran a slope from the bottom of the shaft for a long distance to the dip, the coal improving as they went down. On seeing how the coal was, as to its quality, regularity, and pitch, they then started to run a slope from the surface, and after being much troubled with water and slum, they got to the coal * * * The coal is very hard, and of good quality, and will stand all necessary handling and shipping without necessary breakage or leak * * * At the harbor, which bears the appropriate name of Union Bay, there are very commodious wharves. Four of the longest ships could lie at the principal wharf, and all be loading coal at any stage of the tide. At the other large wharf, freight can be discharged and loaded directly on the cars; at the same time coal may be loaded into vessels if required.

General Manager: Francis D. Little, Comox, B.C.

Overman of Mines: Thomas Russell, Comox, B.C.

VERMILLION MINING CO. (Ltd.)

Incorporated 21st February, 1888. Capital, \$240,000.

Directors:

T. W. Cornell,	|	S. J. Ritchie,
G. G. Allen,	|	S. Burke,

and three others.

VERMILLION CO.—Continued.

The controlling interest in this company was purchased in 1890 by the Canadian Copper Company, of Cleveland, Ohio. The property consists of 9 Lots in the township of Denison, and elsewhere in the Sudbury district, containing in all 2,880 acres. Some development was done in 1887 and 1888.

WAVERLEY HYDRAULIC MINING CO. (Ltd.)

Incorporated 14th July, 1879. Authorized Capital, \$100,000, divided into 1,000 shares of a value of \$100 each.

Directors :

J. B. Nason, Barkerville, B.C.,	Joseph Mason, Barkerville, B.C.,	W. A. Jones, Barkerville, B.C.,
Wm. Forrest, " "	" "	James Craig, Quesnelle, B.C.

Head Office : James Stone, Secretary, Barkerville, B.C.

This Company owns 110 acres in fee simple, and operates an alluvial claim at Grouse Creek, in the Barkerville Division of the Cariboo mining district, in the Province of British Columbia. About \$50,000 have been expended in preliminary workings; it is hoped that "bed-rock" will be struck before the end of the present season (1890), when it is expected good pay-ground will be reached. Twelve men employed.

Superintendent : John Pomeroy, Grouse Creek, Barkerville, B.C.

WELDFORD COAL MINING CO.

Incorporated 9th May, 1885. Authorized Capital, \$75,000, in shares of \$3 each.

Directors :

Matthew T. Glenn,	James Brown,	Andrew Dunn,
all of Weldford, N.B.		

Head Office : Weldford Station, Kent Co., N.B.

Formed to explore, dig, raise and mine gold, silver, coal and other ores and minerals, together with the crushing and smelting of the same with such other things as are incident thereof.

WELLINGTON COLLIERY CO.**Owners :**

Robert Dunsmuir & Sons, Wellington, B.C.,

General Manager : John Bryden. | *General Overman :* Alexander Sharp.

Head Office : Wellington Colliery, Wellington, B.C.

WELLINGTON COLLIERY CO.—Continued.

This Company owns and operates the Wellington Colliery, situate at Wellington, Vancouver Island, British Columbia. During the year ended 31st December, 1889, the total output of coal amounted to 273,383 tons, 14 cwts. Of this quantity, there were exported 197,510 tons; sold for home consumption, 76,524 tons; and there were unsold, including coal in stock at 1st January, 1890, 3,050 tons, 1 cwt. Total men employed, 862, including 750 whites, 12 boys, and 100 Chinese. The plant at the mines and works is estimated to have a value of \$150,000. Four shafts with slopes, airways and levels; 3 air shafts; seam 6 to 10 feet thick; 12 miles of railway; 6 locomotives; 250 coal waggons; 13 stationery engines, 9 steam pumps; 4 wharves for loading vessels, with bunkers.

Analyses of samples of the coal by the Geological Survey gave:—

Proximate analysis:—	
Hygroscopic water.....	2.75
Volatile combustible matter.....	30.95
Fixed carbon.....	59.72
Ash.....	6.58
	100.00
Ultimate analysis:—	
Carbon.....	72.65
Hydrogen.....	4.89
Oxygen and nitrogen.....	12.77
Sulphur.....	.36
Ash.....	6.58
Hygroscopic water.....	2.75
	100.00

WEST BEAVER CO. (Ltd.)

Registered 3rd May, 1889. Authorized Capital, £150,000, in shares of £1 each, of which £100,000 was offered for subscription, but no allotment took place, all such subscriptions being returned.

Directors:

J. W. Maclure, M.P.,		A. B. Hepburn,
Major-Genl. E. F. Lloyd,		George Seymour,
	R. J. L. Price.	

Head Office: 34 Clements Lane, London, E.C., England.

Formed to acquire and work 149 acres of mineral land known as the West Beaver Silver Mine, in the Township of O'Connor, in the Thunder Bay Mining District, Ontario.

WEST END MINING CO. OF ONTARIO (Ltd.)

Incorporated 28th June, 1889. Authorised Capital \$2,000,000, divided into 200,000 shares of a value of \$100 each, the whole of which has been subscribed and fully paid.

WEST END M. CO. OF ONTARIO—Continued.**Directors :**Herbert N. Nichols, *President.*

S. B. McConnell,

Thos. A. Gorham,

Wm. Woodruff.

Head Office : S. B. McConnell, Secretary, Port Arthur, Ont.

This Company owns some 240 acres of mineral land, situated on the line of the P. A. D. & W. Railway, at a point thirty-eight miles distant from the Town of Port Arthur. Present workings : Shaft 160 feet (sinking), levels, drifts and cross cuts 750 feet. Machinery plant includes steam-hoisting and pumping gear. Ore of an estimated value of \$32,000 raised to date.

WESTERN OF CANADA OIL, LAND & WORKS CO.
(Limited.)

Registered 23rd December, 1871; re-constructed in 1887. The Capital consists of £200,000 in fully paid A shares of £100; £99,850 in fully paid B shares of £50; and £199,700 in A 12 per cent. non-cumulative debentures to bearer of £100. The shares rank equally for dividend. Accounts are made up annually to March 31, and submitted about June.

WESTMORELAND MINING CO.

Incorporated 27th November, 1885. Authorised Capital \$500,000, divided into 100,000 shares of \$5 each.

Directors :

Marquis F. Dickinson.

Grenville D. Braman,

D. L. Hannington.

Head Office : Dorchester, N. B.

Formed to mine and reduce copper, gold, silver and other ores and minerals and such other things as are incident to the attainment of that object.

WHITEBURN MINING CO.

Mines : J. L. Graves, Managing Director, Whiteburn, Queen's Co., N. S.

This is a private Company operated by American capital, organized to mine, smelt and otherwise work gold ores in the Whiteburn District, Queen's County, Nova Scotia. About 80 men employed. Plant consists of 10 stamp mill, hoisting and pumping gear, etc.

WHITE'S ASBESTOS CO. (Ltd.)

Registered in London, 9th April, 1889. Authorized Capital \$100,000 stg., in 100,000 shares of £1 each. Fully paid shares were issued to the vendor.

Directors :

John A. Hamilton,
Mayor Henry Creagh,

A. H. White.

T. B. Forward,
J. Pellat Rickmann.

Canadian Offices : Alfred H. White, Managing Director, Quebec.

Formed to acquire and work asbestos and other mineral lands in the Dominion of Canada. The property conveyed consists of Lots 5 and 6, 1st Range, South Garthby, 67 acres ; Lot 16, 3rd Range, South Garthby, 67 acres ; Lot 16, 3rd Range, South Garthby, 100 acres ; Lot 7, 6th Range, Coleraine, 105 acres ; and Lot 9, 10th Range, Coleraine, 100 acres ; in all 379 acres.

Mine Superintendent : Lucius J. Boyd, Sherbrooke, Que.

WOLFESTOWN ASBESTOS MINING CO.

Owners :

Dickson Anderson, Montreal, Que., | Wm. Askin, Sarnia, Ont.,
C. C. Cleveland, Danville, Ont.

Head Office : Wm. Sclater & Co., 42 Foundling St., Montreal.

This Company owns and operates a property, situate Lot 25 in Range 4, Wolfestown, Que. In 1890 33 men were employed.

Superintendent : L. D. Ross, Belmina P.O., Wolfestown, Que.

WOLFESTOWN MINING CO.

Principal Owners :

Dickson Anderson, Montreal, | L. D. Ross, Wolfestown.

Head Office : Wm. Sclater & Co. 42 Foundling St., Montreal.

This Company carries on the business of miners and shippers of Soapstone and other minerals, and owns and operates a quarry at Belmina, in the Eastern Townships, of the Province of Quebec. About 150 tons were raised in 1889.

Superintendant : L. D. Ross, Belmina P.O., Wolfestown, Que.

ABSTRACT OF THE
STATUTORY PROVISIONS

IN FORCE IN THE DOMINION OF CANADA AND THE
SEVERAL PROVINCES RESPECTING THE

FORMATION AND ORGANIZATION
OF
JOINT STOCK COMPANIES

PREPARED BY
J. A. GEMMILL, BARRISTER-AT-LAW, OTTAWA.

DOMINION OF CANADA.

Under the provisions of "The Companies Act," Revised Statutes of Canada, 1886, chapter 119, incorporation may be thus obtained :

Purposes.—Sec. 3.—The Governor-in-Council may, by letters patent under the Great Seal, grant a charter to any number of persons, not less than five, who petition therefor, constituting such persons, and others who thereafter become shareholders in the company thereby created, a body corporate and politic, for any of the purposes or objects to which the legislative authority of the Parliament of Canada extends, except the construction and working of railways, or the business of banking and the issue of paper money, or the business of insurance.

Notice to be Given.—Sec. 4.—One calendar month's notice must be given in the CANADA GAZETTE of intention to apply, stating therein :

- (a) The proposed corporate name of the Company ;
- (b) The purposes for which its incorporation is sought ;
- (c) The chief place of business within Canada ;
- (d) The proposed amount of capital stock ;
- (e) The number of shares and the amount of each share ;
- (f) Names in full and the address and calling of each applicant, with special

mention of not less than three and not more than fifteen of their number who are to be the first or provisional directors of the Company, and the majority of whom must be residents of Canada.

Petition.—Sec. 5. Within a month after last publication of such notice, applicants may petition the Governor-in-Council for the issue of such letters patent :

- (a) The petition must state the facts set forth in the notice, the amount of stock taken by each applicant, the amount paid in upon the stock of each applicant, and the manner in which it is held for the company ;
- (b) At least one half of the total amount of the proposed capital stock of the company must be subscribed ;
- (c) At least ten per cent. of the stock so taken must be paid up thereon ;
- (d) The amount thus paid up must be paid in to the credit of the company or of

trustees therefor, and stand at such credit in some chartered bank in Canada, unless the object of the company is one requiring that it should own real estate, in which case any portion, not exceeding one half of the amount to be paid up may be taken as paid in, if *bona fide* invested in real estate suitable to such object, duly held by trustees for the company, and being of the required value over and above all incumbrances thereon.

Powers of the Company.—Sec. 24.—Every company incorporated under this Act may acquire, hold, sell and convey any real estate requisite for the carrying on of the undertaking of such company, and shall forthwith become and be vested with all property and rights, real and personal, theretofore held by or for it under any trust created with a view to its incorporation, and with all the powers, privileges and immunities requisite or incidental to the carrying on of its undertaking, as if it was incorporated by a special Act of Parliament, embodying the provisions of this Act and of the Letters Patent.

Shares to be Paid in Cash.—Sec. 27.—Every share in the company shall, subject to the provisions of sub-section *d* of section 5 of this Act, be deemed to have been issued and to be held subject to the payment of the whole amount thereof in cash, unless the same has been otherwise agreed upon or determined by a contract duly made in writing and filed with the Secretary of State at or before the issue of such shares.

*The advantage of obtaining a charter from the Dominion Government under this Act is that the company may carry on business in any part of Canada. The powers conferred by a provincial charter are limited to the province in which the charter may be granted.

Directors.—Sec. 28.—Board of Directors shall not be more than fifteen and not less than three.

Directors' Qualification.—Sec. 30.—A director must be a shareholder, owning stock absolutely in his own right, and to the amount required by the by-laws of the company, and not in arrear in respect of any call thereon. The majority of directors must be residents in Canada.

Increase or Decrease of Number.—Sec. 31.—The number of directors may be increased or decreased by by-law.

Powers of Directors.—Sec. 35.—The Directors of the company may administer the affairs of the company in all things and make or cause to be made for the company, any description of contract which the company, may by law, enter into; and may, from time to time, make by-laws not contrary to law, or to the letters patent of the company, or to this Act for the following purposes:—

(a) The regulating of the allotment of stock, the making of calls thereon, the payment thereof, the issue and registration of certificates of stock, the forfeiture of stock for non-payment, the disposal of forfeited stock and of the proceeds thereof, and the transfer of stock;

(b) The declaration and payment of dividends;

(c) The number of directors, their term of service, the amount of their stock qualification and their remuneration, if any;

(d) The appointment, functions, duties and removal of all agents, officers and servants of the company, the security to be given by them to the company and their remuneration;

(e) The time and place for the holding of the annual meeting of the company, the calling of meetings, regular and special, of the board of directors and of the company, the quorum, the requirements as to proxies, and the procedure in all things at such meetings;

(f) The imposition and recovery of all penalties and forfeitures which admit of regulation by by-law;

(g) The conduct in all other particulars, of the affairs of the company;

And the directors may, from time to time, repeal, amend or re-enact the same; but every such by-law and every repeal, amendment or re-enactment thereof, unless in the mean time confirmed at a general meeting of the company, duly called for that purpose, shall only have force until the next annual meeting of the company, and in default of confirmation thereat, shall, at and from that time only, cease to have force;

2. No by-law for the issue, allotment or sale of any portion of the unissued stock at any greater discount, or at any less premium than that which has been previously authorized at a general meeting, and no by-law for the remuneration of the president or any director, shall be valid or acted upon until the same has been confirmed at a general meeting.

Issue of Bonds.—Sec. 37.—The directors may, when authorized by a by-law for that purpose, passed and approved of by the votes of shareholders, representing at least two-thirds in value of the subscribed stock of the company represented at a special general meeting duly called for considering the by-law:—

(a) Borrow money upon the credit of the company and issue bonds, debentures or other securities for any sums borrowed, at such prices as are deemed necessary or expedient; but no such debenture shall be for a less sum than one hundred dollars;

(b) Hypothecate or pledge the real or personal property of the company to secure any sums borrowed by the company;

But the amount borrowed shall not, at any time, be greater than seventy-five per cent of the actual paid up stock of the company; but the limitation made by this section shall not apply to commercial paper discounted by the company.

Calls.—Sec. 38. The directors may, from time to time, make such calls upon the shareholders in respect of all moneys unpaid upon their respective shares, as they think fit, at such times and at such places and in such payments or instalments as the letters patent, or this Act, or the by-laws of the company require or allow.

TARIFF OF FEES.

The following is the schedule of the fees payable :—

1. When the proposed capital stock of the company is \$500,000 and upwards.....	\$200 00
2. When the proposed capital stock of the company is \$200,000 and upwards, and less than \$500,000.....	150 00
3. When the proposed capital stock is \$100,000 or upwards and less than \$200,000.....	100 00
4. When the proposed capital stock is less than \$100,000.....	50 00
5. When the proposed capital stock is \$40,000 or less than \$40,000	30 00

FORMS.

[The following forms have been extracted from Mr. W. E. Hodgins' work on the Incorporation of Joint Stock Companies, Canada. 1888.]

I. Notice of Intention to Apply for Letters Patent of Incorporation, to be Inserted in the "Canada Gazette."

Notice is hereby given that within one month after the last publication of this notice in the *Canada Gazette*, application will be made to his Excellency the Governor-General in Council for a charter of incorporation by letters patent, under the provisions of the "Companies' Act," Revised Statutes of Canada, chapter 119, incorporating the applicants and such other persons as may become shareholders in the proposed company, a body corporate and politic, under the name and for the purposes hereinafter mentioned :—

- (1) The proposed corporate name of the company is "The Company," (Limited).
- (2) The purposes within the purview of the Act, for which incorporation is sought, are
- (3) The chief place of business of the said company is to be the _____ of _____ in the Province of _____
- (4) The intended amount of the capital stock is _____ dollars.
- (5) The number of shares is to be _____, and the amount of each share is to be of the value of _____ dollars.
- (6) The names in full, and the address and calling of each of the applicants, are as follows :—
 _____ of whom the
 said _____ are to be the
 first or provisional directors of the said company.

Dated at _____, this _____ day of _____, A. D. 18 _____.

Solicitors for the Applicants.

2. Declaration Verifying Insertion in the "Canada Gazette" of Notice of Intention to Apply for Letters Patent of Incorporation.

CANADA.)
 Province of) In the matter of the application of
 County of) , and others, for letters patent of
 To wit :) incorporation as "The
 Company" (Limited).

I, _____ of the _____ of _____, do solemnly declare.
 in the _____ of _____, do solemnly declare.
 1. That I have searched the files of the *Canada Gazette* and find that notice of the intention of the petitioners therein mentioned to make application for letters patent of incorporation, as "The _____ Company" (Limited), a copy of which is hereto annexed, marked "A" was duly inserted in the issues of the *Canada Gazette* of the dates following, that is to say, 18 _____

And I make this solemn declaration, conscientiously believing the same to be true and by virtue of the "Act Respecting Extra Judicial Oaths."

Declared before me at the _____ of _____ in the _____
 this _____ day of _____ of _____ A.D., 18 _____

3. Petition for Incorporation.

To His Excellency
 The Governor-General-in-Council :
 The petition of _____

humbly sheweth :

(1) That your petitioners are desirous of obtaining a charter of incorporation by letters patent under the provisions of "The Companies' Act," Revised Statutes of Canada, chapter 119, incorporating your petitioners and such others as may become shareholders in the company thereby created, a body corporate and politic, under the name of "The _____ Company" (Limited), which is not the name of any other known company incorporated or unincorporated, or liable to be confounded therewith, or otherwise on public grounds objectionable.

(a) *Here insert names in full, address and calling, or occupation of each of the applicants.*

(2) That your petitioners have given one month's previous notice of their intention to apply for the said letters patent, by inserting the same in the issues of the *Canada Gazette*, of the following dates, 18 _____, viz. :—

(3) That the purposes or objects of the said company within the purview of the Act for which incorporation is desired, are

(4) That the operations of the said company are to be carried on at _____, and elsewhere throughout the Dominion of Canada.

(5) That the chief place of business of the said company is to be at _____, of _____, in the Province of _____, in the Dominion of Canada aforesaid.

(6) That the amount of the capital stock of the said company is to be _____ dollars.

(7) That the said stock is to be divided into _____ shares of the value of _____ dollars each.

(8) That the said _____ are to be the first or provisional directors of the said company.

(9) That your petitioners have taken the amount of stock, and paid in thereon the several amounts thereon, set opposite to their respective names, as follows :—

Petitioners' Names in Full.	Number of Shares Taken.	Amount of Stock Subscribed for.	Amount Paid in on Stock Subscribed.	How Paid.
Total.....				

(10) The aggregate of stock so taken amounts to _____ dollars, being _____ one half of the total amount of the stock of the company, and the aggregate paid in on the stock so taken amounts to _____ dollars, being _____ per cent. thereof ; such aggregate has been paid to the credit of (*) _____, and is now standing at such credit in the _____ Bank, in the _____ of _____, as appears by the certificate of _____ manager of the said bank at _____ aforesaid, which is hereto annexed.

There has been invested in real estate, suitable to the objects of the company, the sum of _____ dollars.

The said real estate consists of _____ and is of value of at least _____ dollars over and above all incumbrances thereon, being sufficient, with the sum so paid in as aforesaid, to make _____ per cent. of the aggregate of the stock so taken, and is duly held by _____ and _____ as trustees for the said company.†

Your petitioners therefore pray,

That your Excellency will be pleased to grant a charter of incorporation by letters patent under the Great Seal, to your petitioners and such others as may become shareholders in the company thereby created, a body corporate and politic, for the purposes and objects aforesaid, under the name of "The _____ Company" (Limited).

* Here state if paid in to the credit of the company, or of trustees for the company, giving the names of such trustees.

† This clause is only to be inserted when necessary.

And your petitioners, as in duty bound, will ever pray.

Dated at the _____ of _____ in the _____ of _____ this
 day of _____ A. D., 18____
 Signed and executed }
 in the presence of }

4. Declaration Verifying Signatures to Petition Praying for Letters Patent of Incorporation.

CANADA. }
 Province of _____ of _____ and others for letters patent
 County of _____ of incorporation as "The
 To wit : } Company" (limited).

I, _____ of the _____ of _____ in the
 County of _____ and Province of _____ do
 solemnly declare ;

1. That I was personally present and did see
 sign their respective names to the petition (hereunto annexed) praying for letters
 patent of incorporation as "The _____ Company" (limited).

2. That I know the said

3. That the signatures _____ are of
 the proper handwriting of the said parties respectively.

And I make this solemn declaration, conscientiously believing the same to be
 true, and by virtue of the "Act Respecting Extra Judicial Oaths."

Declared before me }
 at the _____ of _____
 in the _____ of _____
 this _____ day of _____
 , A.D. 18____ . }

5. Declaration Verifying Truth of Petition as to Proposed Corporate Name.

CANADA. }
 Province of _____ of _____ and others for letters patent of incorporation as
 County of _____ of "The _____
 To wit : } Company" (limited).

I, _____ of the _____ of _____ in the
 of _____ and Province of _____
 do solemnly declare.

(1) That the several allegations and statements made and contained in the
 petition for incorporation of "The _____ Company"
 (limited) hereunto annexed are, to the best of my knowledge and belief, true and
 correct.

(2) The proposed corporate name "The _____ Company"
 (Limited), is not, as I verily believe, the name of any other known company,
 incorporated or unincorporated, or liable to be confounded therewith, or otherwise on
 public grounds objectionable.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the "Act Respecting Extra Judicial Oaths."

Declared before me at
 the of
 in the of
 this of
 A. D., 18

6. Bank Manager's Certificate.

In the matter of the application of and others, for letters patent of incorporation as "The Company" (Limited).

I, of the of at the
 of in the of and Province of
 do hereby certify.

That there is deposited in this bank to the credit of *
 "The Company" (Limited), the sum of dollars,
 and the said sum is now remaining at such credit.

Dated at aforesaid this day of A.D., 18

Witness. } Manager (or agent).

7. Declaration Verifying Signature of Bank Manager to Certificate of Deposit.

CANADA,
 Province of
 County of
 To wit : } In the matter of the application of
 and others for letters patent of incorporation as
 "The Company,"
 (Limited).

I, of the of in the
 County of and Province of do
 solemnly declare.

(1) That I was personally present, and did see the annexed certificate of deposit
 duly signed by who is the manager (agent or cashier)
 of the Bank of at the
 of aforesaid.

(2) That I know the said

(3) That I am the subscribing witness to the said document.

And I make this solemn declaration, conscientiously believing the same to be true and by virtue of the "Act Respecting Extra Judicial Oaths."

Declared before me at the
 of in the
 of this day of
 A.D. 18

*Here state if the amount be deposited to the credit of the company or of trustees thereof.

3. Form of Letters Patent.

CANADA.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, etc., etc.

To all to whom these presents shall come, or whom the same may in any wise concern :
GREETING :—

WHEREAS, in and by "The Revised Statutes of Canada," chapter 119, known as "The Companies' Act" it is amongst other things, in effect enacted, that the Governor-in-Council may by letters patent under the Great Seal, grant a charter to any number of persons not less than five, who petition therefor constituting such persons and others who thereafter become shareholders in the company thereby created, a body corporate and politic for any of the purposes or objects to which the legislative authority of the Parliament of Canada extends, except the construction and working of railways, or the business of banking and issuing of paper money, or the business of insurance, upon the applicants therefor establishing to the satisfaction of the Secretary of State, or of such other officer as may be charged by the Governor-in-Council to report thereon, due compliance with the several conditions and terms in and by the said Act set forth and thereby made conditions precedent to the granting of such charter.

And whereas _____ have petitioned for a charter under the said Act, constituting them and such others as may become shareholders in the company thereby created, a body corporate and politic, under the name of _____, for the purposes hereinafter mentioned, and have established to the satisfaction of the Secretary of State for Canada (no other officer having been charged by the Governor-General-in-Council to report thereon), due compliance with the several conditions and terms above referred to.

And Whereas, among other things, it is in the notice of this application and in the said petition averred and it has been established, that the amount of the capital stock of the intended company is _____ dollars, divided into _____ shares of _____ dollars each.

That the said _____ has taken _____ shares of said stock, and has paid in thereon the sums of _____ dollars.

That the said _____ has taken _____ shares of _____ said stock, and has paid in thereon the sum of _____ dollars.

That the said _____ has taken _____ shares of the said stock, and has paid in thereon the sum of _____ dollars.

That the aggregate of the capital stock taken is _____ dollars, and the aggregate paid in thereon is _____ dollars, such aggregate has been paid into the credit of _____ the said _____ company in the _____ in the _____ being a chartered bank in Canada, and is now standing at such credit.

Now Know Ye, that, by and with the advice of our Privy Council for Canada, and under the authority of the hereinbefore in part recited Act, and of any other power and authority whatsoever in us vested in this behalf, we do, by these our letters patent, constitute the said _____, and all others who may become shareholders in the said company, a body corporate and politic, by the name of _____ with all the rights and powers given by the said Act and for the purposes of _____

That the place within the Dominion of Canada which is to be the chief place of business of the said company, is _____

The capital stock of the said company shall be _____ dollars, divided into _____ shares of _____ dollars each, subject to the increase of such capital stock under the provisions of the said Act.

That the said
the company.

are to be the first or provisional directors of

Provided always that nothing in these presents, expressed or contained, shall be taken to authorize the construction or working of railways, the business of banking, or the issue of paper money, or of insurance, by the said company

In testimony whereof, etc.,

(Great Seal)

PROVINCE OF ONTARIO.

Under the provisions of "The Ontario Joint Stock Companies Letters Patent Act," Revised Statutes of Ontario, 1886, chapter 157,

Certain Powers May be Granted by Letters Patent to Companies Incorporated in Britain.—Sec. 3.—Any corporation now or hereafter incorporated under Imperial Statutes may be authorized by the Lieut.-Governor-in-Council by letters patent under the Great Seal of the Province to carry on any of its business in the Province of Ontario. A verified copy of the Act of Parliament, charter or other instrument incorporating such company must first be deposited with the Provincial Secretary.

Charters for Other Purposes.—Sec. 4.—A charter of incorporation may be granted to any number persons, not less than five, for any purposes or objects to which the legislative authority of the Legislature extends, except the construction and working of railways, and the business of insurance.

Notice to be Given.—Sec. 6.—Four consecutive weeks' notice of intention to apply must be given in the *Ontario Gazette*. The notice should give information similar to that required under Sec. 4 of the Dominion Act. See page 180.

Petition.—Sec. 7.—Within a month after the last publication of the notice the applicants may petition the Lieut.-Governor, through the Provincial Secretary, for the issue of the letters patent ;

(2) The petition should in every respect correspond with the notice in the *Gazette*, and in addition state the amount of stock taken by each applicant, and also the amount, if any, paid in upon the stock of each applicant ;* (3) Also whether the amount is paid in cash or by transfer of property, or how otherwise.

(4) The petition should be signed by each of the applicants personally, but if in any case it is signed by attorney the power of attorney should accompany it.

General Powers.—Sec. 16.—Are similar to those under Sec. 24 of the Dominion Act. See page 180.

Directors.—Sec. 29.—The affairs of the company shall be managed by a board of not less than three directors.

Qualification.—Sec. 31.—A director must be a shareholder owning stock absolutely in his own right and not in arrear in respect of any call thereon.

Calls.—Sec 45.—Not less than ten per cent. upon the allotted stock of the company shall, by means of one or more calls, be called in and made payable within one year from the incorporation of the company ; the residue when and as the by-laws of the company direct.

*The subscriptions for stock are proved by producing the company's stock book with the signatures of each subscriber duly verified.

Power to Issue Bonds, Etc.—Sec. 38.—(1) In case a by-law authorizing the same is sanctioned by a vote of not less than two-thirds in value, of the shareholders then present in person or by proxy, at a general meeting duly called for considering the by-law, the directors may borrow money upon the credit of the company, and issue the bonds, debentures or other securities of the company, and may sell the said bonds, debentures, or other securities at such prices as may be deemed expedient or be necessary; but no such debentures shall be for a less sum than \$100.

(2) The directors may, under the like sanction, hypothecate, mortgage or pledge the real or personal property of the company to secure any sum or sums borrowed for the purposes thereof.

Preferential Stock.—Sec. 25.—(1) The directors may make a by-law for creating and issuing any part of the capital stock as preference stock, giving the same such preference and priority as respects dividends and otherwise over ordinary stock as may be declared by the by-law.

(2) The by-law may provide that the holders of such preference shares shall have the right to select a certain stated proportion of the board of directors, or may give them such other control over the affairs of the company as may be considered expedient.

(3) No such by-law shall have any force or effect whatever until after it has been unanimously sanctioned by the vote of the shareholders, present in person or by proxy, at a general meeting of the company, duly called for considering the same, or unanimously sanctioned in writing by the shareholders of the company.

(4) Holders of such preference stock shall be shareholders within the meaning of this Act, and shall in all respects possess the rights and be subject to the liabilities of shareholders within the meaning of this Act, provided, however, that in respect of dividends and otherwise they shall, as against the original or ordinary shareholders, be entitled to the preference given by any by-law as aforesaid.

(5) Nothing in this section shall effect or impair the rights or creditors of any company.

Tariff of Fees.

For a charter when the proposed capital of the company is \$200,000 or upwards	\$60.00
When it is \$100,000, but is less than \$200,000	50.00
When it is \$50,000, but is less than \$100,000	40.00
When it is less than \$50,000, but more than \$3,000	30.00
When it is \$3,000 or less	10.00

PROVINCE OF QUEBEC.

Under the provisions of the Revised Statutes of Quebec, 1888,

Purposes.—Article 4694.—A charter of incorporation may be granted to any number of persons, not less than five, for any of the purposes within the jurisdiction of the Legislature of the Province except for the construction and working of railways and the business of insurance.

Notice.—Article 4697.—Four weeks' notice of application to be given in the *Quebec Gazette*. Number of directors to be not less than three and not more than nine, of whom the major part shall be resident in Canada and British subjects. See *Form of Notice below, page 191.*

Petition.—Article 4698.—Within a month of last publication of notice, petition may be sent in to Lieut.-Governor for issue of letters patent.

(2) The petition must recite the facts set forth in the notice and the amount of stock taken by each applicant and by all other persons therein named and the amount paid in upon the stock of each applicant and the manner in which the same has been paid in and is held for the company.

(3) Aggregate of stock taken must be at least one half of the total amount of the stock of the company.

(4) The aggregate paid in thereon must be at least ten per cent. thereof, or five per cent. of the total capital, unless such exceed \$500,000, in which case the aggregate paid in upon such excess must be at least two per cent. thereof.

(5) Such aggregate must have been paid in to the credit of the company or of trustees therefor, and must be standing at such credit in some chartered bank within the Province unless the object of the company is one requiring that it should own real estate, in which case not more than one half thereof may be so taken as invested in real estate suitable to such object duly held by trustees therefor and being fully of the full value over and above all incumbrances thereon.

Capital Stock.—Article 4722.—(1) The capital stock must consist of that portion of the amount authorized by the charter which shall have been *bona fide* subscribed for and allotted and must be paid in cash.

(2) The property accounts of a company must represent only the amount of the actual *bona fide* outlay necessary for the undertaking. No stock shall be issued to represent the increased value of any property and any such issue shall be null and void.

(3) Watering of stock is prohibited and all stock so issued shall be null and void.

(4) The capitalization of surplus earnings and the issue of stock to represent such capitalized surplus are also void, and all stock so issued shall be null and void, and the directors consenting to such issue of stock shall be jointly and severally liable to the holders thereof for the reimbursement of the amount paid for such stock.

(5) Every form and manner of fictitious capitalization of stock or the issuing of stock which is not represented by a legitimate and necessary expenditure in the interest of the company and not represented by an amount in cash paid into the treasury of the company which has been expended for the promotion of the objects of the company, is prohibited and such stock is null and void.

Corporations Under Imperial Statutes.—Article 4764.—In case a corporation incorporated under Imperial Statutes carries on or desires to carry on any of its business within the Province, letters patent may be granted to such company, and the company may thenceforth exercise within the Province any powers, privileges and rights set forth in the letters patent. Article 4765.—A certified true copy of the Act of Parliament, charter or other instrument incorporating the company must be deposited with the Provincial Secretary before the letters patent will issue.

Tariff of Fees.

1. When the capital shall not exceed \$10,000 a fee of	\$25.00
2. From \$10,000 to \$50,000	30.00
3. From \$50,000 to \$100,000	40.00
4. From \$100,000 to \$200,000	50.00
5. For \$200,000 and over	60.00

Form of Notice of Application, Quebec.

Notice is hereby given that _____ contractor,
 _____ manufacturer
 grocer, _____ contractor
 _____ contractor
 machinist,, _____ merchant
 _____ merchant, all of the _____ of the
 in the Province of Quebec, intend to apply for letters patent in
 virtue of section 4696 and following of the Revised Statutes of the said Province, to
 constitute them and other persons who may become shareholders, a
 body politic and corporate in virtue of the said Statutes, under the name of "The
 _____ Company.
 The object of the said company will be the _____
 in _____
 The chief office and place of business of the said company will be in the
 of _____ in the Province of Quebec.
 The amount of capital stock of the said company will be _____
 thousand dollars, divided into _____ shares of _____ dollars each.
 The above named persons, all subjects of Her Majesty, and residing in Canada, are
 to be provisional directors of the said company.
 Date _____
 _____ Attorney for Petitioners.

NOVA SCOTIA.

Under the provisions of the "Nova Scotia Joint Stock Companies' Act," Revised Statutes of Nova Scotia, 1884, Cap. 79, incorporation is granted for the same purposes and subject to the same conditions of procedure and form as prevail under the Dominion or Canada Joint Stock Companies Act, *ante page* 180.

Tariff of Fees.

When the capital stock is \$10,000 and under	\$20.00
When the capital stock is up to \$50,000	30.00
When the capital stock is up to \$100,000	40.00
When the capital stock is up to \$250,000	50.00
When the capital stock is up to \$500,000	60.00
When the capital stock is over \$500,000	70.00

NEW BRUNSWICK.

Under the provisions of the New Brunswick Joint Stock Companies Letters Patent Act, 48 Vic. (1885) Cap. 9.

Purposes.—Sec. 3.—The Lieut.-Governor-in-Council may grant a charter to any number of persons, not less than five, who shall petition therefor, constituting such persons and others who may become shareholders in the company thereby created, a body corporate and politic for any purposes or objects to which the legislative authority of the Legislature of New Brunswick extends, except the construction and working of railways and the business of insurance, or the manage-

ment of trades unions, friendly societies, building societies or other associations of like character.

Notice to be Given.—Sec. 4.—Two weeks' previous notice must be given in the *Royal Gazette* of intention to apply, and the notice must state :

- (a) Proposed corporate name of the company ;
- (b) The object for which its incorporation is sought ;
- (c) The town in New Brunswick in which the chief place of business is to be ;
- (d) The amount of capital stock, which shall not be less than \$2,000 actually subscribed ;
- (e) The number of shares and amount of each share ;
- (f) The names, address and calling of each of the applicants with special mention of not less than three of their number who are to be the first or provisional directors of the company.

Petition.—Sec. 5.—Within a month applicants may petition Lieut.-Governor, through the Provincial Secretary, for issue of such letters patent.

(a) Such petition must recite the facts set forth in the notice and must further state the amount of stock taken by each applicant and the amount, if any, paid in upon the stock of each applicant ;

(b) The aggregate of the stock so taken must be at least one-half of the total stock of the company ;

(c) The petition must also state whether such amount is paid in cash or by transfer of property or how otherwise.

(d) In case the petition is not signed by all the shareholders whose names are proposed to be inserted in letters patent, it shall be accompanied by a memorandum of association, signed by all the persons whose names are to be so inserted, or by their attorneys, duly authorized in writing, and such memorandum shall contain the particulars required by the next preceding section and may be in the form A in the schedule of this Act. *See page 193.*

(e) Any payments which shall have been made in cash on account of the stock must have been paid in to the credit of the company or of trustees therefor, and must be standing at such credit in some chartered bank in the Province.

When Publication not Necessary.—Sec. 7.—Publication of notice is not necessary when capital stock does not exceed \$5,000.

Directors.—Sec. 19.—The affairs of every company shall be managed by a board of not less than three directors.

Directors' Qualification.—Sec. 21.—A Director must be a shareholder owning stock in his own right to the amount required by the by-laws of the company and not in arrear in respect of calls.

First Call.—Sec. 43.—Not less than ten per cent. upon the allotted stock of the company shall by means of one or more calls be made payable and called in within one year from the incorporation of the company.

Restriction.—Sec. 69.—No company shall issue stock to represent the increased value of any property of the company, nor shall the watering of stock be allowed. The issue of stock prohibited is null and void.

Issue of Shares.—Sec. 83.—Every share in the company shall be deemed and taken to have been issued, and to be held subject to the payment of the whole amount thereof in cash, unless the same shall have been otherwise determined by a contract duly made in writing and filed with the Provincial Secretary at or before the issue of the shares.

What Prospectus Must Contain.—Sec. 84.—Every prospectus of the company and every notice inviting persons to subscribe for shares in the company shall specify the date and names of the parties to any contract entered into by the company or the promoters, directors or trustees thereof, whether subject to adoption by the directors of the company or otherwise; and any prospectus or notice specifying the same shall be deemed fraudulent on the part of the promoters, directors and officers of the company knowingly issuing the same as regards any person taking shares in the company on the faith of such prospectus unless he shall have had notice of such contract.

Borrowing Powers.—Sec. 85.—In case a by-law authorizing the same is sanctioned by a vote of not less than two-thirds in value of the shareholders then present in person or represented by proxy at a special general meeting duly called for considering the by-law, the directors may borrow money upon the credit of the company and issue the bonds, debentures or other securities for any sums borrowed at such prices as may be deemed expedient or necessary, but no such debentures or bonds shall be for a less sum than one hundred dollars, and the directors may, under the like sanction, hypothecate or pledge the real or personal property of the company to secure any sums borrowed for the company, provided that the amount borrowed shall not at any time be greater than seventy-five per cent. of the actual paid up stock of the company. This limitation does not apply to the commercial paper discounted by the company.

Tariff of Fees.

1. When the proposed capital stock of the company is \$10,000 or less the fee to be	\$20.00
2. When the proposed capital stock of the company is \$10,000 and less than \$25,000 the fee to be	25.00
3. When the proposed capital stock of the company is \$25,000 and less than \$50,000 the fee to be	30.00
4. When the proposed capital stock of the company is \$50,000 and less than \$100,000, the fee to be	40.00
5. When the proposed capital stock of the company is \$100,000 and less than \$200,000, the fee to be	60.00
6. When the proposed capital stock of the company is \$200,000 and less than \$300,000 the fee to be	80.00
7. When the proposed capital stock of the company is to be \$300,000 and less than \$500,000, the fee to be	100.00
8. When the proposed capital stock of the company is \$500,000 and less than \$1,000,000, the fee to be	125.00
9. For every \$500,000 in excess of \$1,000,000 an additional fee of	25.00

SCHEDULE.—FORM A.

Section 5, Sub-Section 4.

Memorandum of Association of the Company, a company for which incorporation by letters patent is sought under the provisions of the New Brunswick Joint Stock Companies Letters Patent Act and a petition for which incorporation accompanies the memorandum agreeably to the Act.

- 1st. The proposed corporate name of the company is "The Company."
- 2nd. The object for which the incorporation of the company is sought is (here state the object of the company) with such other things as are incident thereto.

3rd. The office or principal place of business is to be at in the County of

4th. The nominal capital of the company is (here state the total capital) to be divided into (here state the number of shares) shares of (here state the amount of each share) dollars each.

5th. The names of the provisional directors of the company are :
of in the County of
of in the County of
of in the County of

Farmer,
Merchant,
Banker.

We, the several persons whose names are subscribed, are desirous of being formed into a company in pursuance of this memorandum of association, and the petition herewith presented, under the New Brunswick Joint Stock Companies Letters Patent Act, and we hereby respectively agree to take the number of shares in the capital of the company set forth opposite our names :

NAME.	Address.	Occupation.	No. of Shares.

Dated the _____ day of _____ A. D.

MANITOBA.

Under the provisions of the Consolidated Statutes of Manitoba (1880-1), p. 218.

Purposes.—Sec. 226.—The Lieut.-Governor may grant charter to any number of persons, not less than five, who shall petition therefor and same may be created a body corporate and politic for any of the purposes or objects to which the legislative authority of the Legislature of Manitoba extends, except the construction and working of railways and the business of insurance and the buying and selling of land. The capital stock of a company incorporated under the act can not at any time exceed \$500,000.

Notice.—Sec. 227.—A month's notice of intention to apply to be given in *Manitoba Gazette* The notice should give information similar to that required under Sec. 4, of the Dominion Act, *see page 180.*

Petition.—Sec. 226.—Within a month after the last publication the applicants may petition for the issue of Letters Patent :

(1) Such petition must state the facts required to be set forth in the notice, and must first further state the amount of stock taken by such applicant, and also the amount, if any, paid in upon the stock of each applicant ;

(2) The petition shall also state whether the amount is paid in cash or transfer of property or how otherwise ;

(3) In case the petition is not signed by all the shareholders whose names are proposed to be inserted in the letters patent it shall be accompanied by a memorandum of association, signed by all the parties whose names are to be inserted, or by their attorneys duly authorized in writing, and such memorandum shall contain the particulars required by the next preceding sub-section.

There is no requirement as to subscription of stock or the payment of a percentage of the stock at the time of the application for incorporation.

Directors.—Sec. 243.—The board of directors shall not be less than three nor more than nine directors.

Borrowing Powers.—Sec. 250.—Similar to Ontario Joint Stock Company, page 189.

Calls.—Sec. 255.—Not less than ten per cent. upon the allotted stock of the company shall, by means of one or more calls, be called in and made payable within one year from the incorporation of the company ; the residue when and as the by-laws of the company shall direct.

Tariff of Fees.

\$500,000 and upwards	\$150.00
\$200,000 and less than \$500,000	100.00
\$100,000 and less than \$200,000	75.00
\$50,000 and less than \$100,000	50.00
Less than \$50,000	30.00

NORTH-WEST TERRITORIES.

UNDER THE PROVISIONS OF "THE COMPANIES' ORDINANCE," REVISED ORDINANCES OF THE N. W. T., 1888, CHAPTER 30.

Purposes.—Sec. 3.—A charter of incorporation may be granted by the Lieutenant-Governor to any number of persons, not less than three, for any of the purposes or objects to which the legislative authority of the Legislative Assembly of the Territories extends.

Notice to be Given.—Sec. 4.—The applicants must advertize by notice published at least once in the *Official Gazette* of the Territories, and in three consecutive weekly issues of any newspaper published at or nearest the place which is to be the chief place of business of the company, their intention to apply for the same :—

- (1) Proposed corporate name of the company.
- (2) The object of the incorporation.
- (3) Place which is to be its chief place of business.
- (4) Proposed amount of its Capital Stock.

- (5) The number of shares and amount of each share.
- (6) Names in full and address and calling of each applicant with special mention of the names of not less than three nor more than nine of their number who are to be the first directors of the company, the majority of whom shall be residents of Canada.

Petition.—Sec. 5.—Within two months after the last publication of such notice the applicants may petition the Lieutenant-Governor for the issue of such Letters Patent.

Contents of Petition.—Sec. 6.—The petition shall set forth :—

- (1) The facts contained in the notice.
- (2) The amount of stock taken by each applicant and the amount paid in upon the stock of each applicant, as also the manner in which the same has been paid in, and is held for the company.

Sec. 7.—The aggregate of the stock so taken shall be at least the one-half of the total amount of the proposed Capital Stock of the company.

Sec. 8.—The aggregate paid in on the aggregate stock so taken shall be at least ten per cent. and shall be paid in to the credit of the company or trustees therefor, and shall be standing at such credit of Canada, unless the object of the company is one requiring that it should own real estate, in which case such aggregate may be taken as paid in if it is *bona fide* invested in real estate suitable to such object which is held by trustees for the company and is of the required value, over and above all incumbrances thereon.

General Powers of Company.—Sec. 30.—Are similar to those under Sec. 24 of the Dominion Act. *See page 180.*

Number of Directors.—Sec. 34.—Not more than nine and not less than three.

Qualification.—Sec. 36.—Same as in the Dominion Act. *See page 181.*

Borrowing, &c.—Sec. 44.—Same as in the Dominion Act. *See page 181.*

Calls.—Sec. 45.—May be made as the directors think fit.

Tariff of Fees.

Sec. 113.—

(1) When the Capital Stock of the company is \$400,000 and upwards the fee to be.....	\$200.00
(2) When the Capital Stock of the company is \$200,000 or upwards, and under \$400,000	150.00
(3) When the Capital Stock of the company is \$100,000 and upwards, and under \$200,000.....	100.00
(4) When the Capital Stock of the company is \$50,000 and upwards, and under \$100,000	50.00
(5) When the Capital Stock of the company is \$40,000 and upwards, and under \$50,000	40.00
(6) When the Capital Stock of the company is over \$10,000 and under \$40,000	30.00
(7) When the Capital Stock of the company is \$10,000 or under.....	20.00

BRITISH COLUMBIA.

Prior to 26th April, 1890, the incorporation of joint stock companies was regulated by chapter 21 of the Consolidated Acts, (1888), of British Columbia, but by the "Companies Act, 1890," 53 Vic., chap. 6), the stockholders of Corporations formed under the provisions of the latter Act, are to be subject to the conditions and liabilities of the Act of 1890 only. The Act of 1888 has not been repealed, and as incorporation under the Act of 1890 does not appear to be obligatory, it is apprehended a charter may still be obtained under the provisions of the Act of 1888. There is no doubt at all events, that the provisions of the Act in respect to foreign corporations being admitted to do business in the Province are still in force.

Under the provisions of the "Companies Act, 1890," 53 Vic., cap. 6.

Purposes.—Sec. 2.—Corporations for any lawful purpose may be formed according to the provisions of the Act, if the purpose comes within any of the classes of subjects in respect of which the Legislature of the Province has the power of legislation; and any such corporation, the members and stockholders thereof, shall be subject to the conditions and liabilities in the Act imposed, and to none others, anything contained in any law to the contrary notwithstanding.

Mode of Incorporation.—Sec. 3.—Any three or more persons who may desire to form a company under the Act may make, sign and acknowledge before some person competent to take the acknowledgment of deeds, a memorandum of association in duplicate, in which it shall be stated the corporate name of the company, with the addition of the words "limited liability," the object for which the company shall be formed, the amount of its capital stock, and into how many shares (which must each be for the same amount) divided, the time of its existence (not to exceed fifty years), the number of shares of which the stock shall consist, the number of trustees and their names, who shall manage the concerns of the company for the first three months, and the name of the city, town or electoral district in which the principal place of business of the company is to be located.

Powers of Corporations.—Sec. 5.—When the memorandum of association referred to in section 3 shall have been filed with the Registrar of Joint Stock Companies, the same shall be the constitution of and binding upon the Company, and the Registrar of Joint Stock Companies shall issue, under his hand and seal, a certificate of incorporation, stating that the company so applying for incorporation is incorporated as a company under this Act, and thereupon the persons who have signed and acknowledged the memorandum of association, and their successors, shall be, for the term mentioned in the memorandum of association, a body politic and corporate, in fact and in name, by the name stated in the memorandum of association, of which the trustee mentioned in the memorandum of association, who are to manage the concerns of the company for the first three months, are to be trustees for the first three months, and shall, by their corporate name, have succession for the period limited, and shall have power:—

- (a). To issue shares, limited to the number stated in their memorandum of association.
- (b). To sue and be sued in any court.
- (c). To make and use a common seal, and alter the same at pleasure.
- (d). To purchase, hold, sell, and convey such real and personal estate as the purposes of the Corporation shall require.
- (e). To appoint such officers, agents and servants as the business of the Corporation shall require; to define the powers, prescribe the duties, and fix the compensation (if any) of such officers, agents, and servants from time to time, as occasion may justify.
- (f). To require of such officers, agents and servants such security as may be thought proper for the fulfilment of their duties, and to remove them at will, except that no trustee shall be removed from office unless by a vote of two-thirds of the

whole number of trustees, upon a written request signed by holders of two-thirds of the capital stock of the company actually subscribed ;

(g) To make by-laws, not inconsistent with this Act, for the organization of the company, and the management of its property, the regulation of its affairs, the transfer of its stock, and for carrying on all kinds of business within the objects and purposes of the company.

Liability of Shareholders.—Sec. 6.—No shareholder in any such company shall be individually liable for the debts or liabilities of the company ; but the liability of each shareholder shall be limited to the calls and assessments to be legally levied upon the shares held by him.

Additional Powers.—Sec. 8.—All companies incorporated or registered under this Act shall have, in addition to the powers conferred on them by section 5, the following powers, namely :—

(a). The power, subject to the provisions of this Act, to borrow money, for the purpose of carrying out the objects of their respective incorporations, but the total amount of money so borrowed, together with all other debts of the corporation, shall not at any time exceed the amount of its capital stock.

(b). The power, subject to the provisions of this Act, to execute mortgages of their real and personal property, to issue debentures secured by mortgages or otherwise ; to sign bills, notes, contracts and other evidences of, or securities for, money borrowed, or to be borrowed, by them for the purpose aforesaid, and to pledge debentures as security for temporary loans.

These powers shall not be exercised except with the consent of the shareholders representing two-thirds in value of capital stock of the company actually paid in.

Corporation not to issue Bills, Notes, &c., for circulation as Money.—Sec. 9.—No corporation incorporated or registered under this Act shall by any implication or construction, be deemed to possess the power of issuing bills, notes, or other evidences of debt, for circulation as money, or to enable a corporation by any device, to carry on the business of banking or insurance ; but nothing in this section shall be construed into preventing a corporation from issuing bills, notes, or other evidences of debt for its obligation.

Corporation may make certain stipulations.—Sec. 10.—It shall be lawful for a company incorporated or registered under this Act to stipulate in any or all of its contracts, mortgages, bills, notes, or other evidences of debt, that the property of the company only shall be responsible for the obligation, and that the uncalled up stock or assessments shall not be applied thereto to any extent, and in any such case the creditor or other person entitled to the benefit of any such contract or obligation, shall be deemed to have waived the liability of the individual stock holders to assessment.

Number of Trustees.—Sec. 11.—The corporate powers of the corporation shall be exercised by a board of not less than three trustees, who shall be stockholders in the company, and residents of the Province.

Assessments.—Sec. 29.—The trustees of any corporation incorporated under this Act shall have power to levy and collect, for the purpose of paying the proper and legal expenses of such corporation and the obligations thereof, assessments upon the capital stock thereof (the aggregate amount of which, however, is not to exceed the amount of the capital stock), in the manner and form and to the extent hereinafter provided.

Total Amount of Assessment.—Sec. 30.—The total amount of assessment levied upon each share shall not exceed in the aggregate the value at which it was issued.

Limit of Assessment.—Sec. 31.—No one assessment, except as hereinafter provided, shall exceed ten per cent. of the amount of the capital stock of the company named in the memorandum of association actually subscribed, and no assess-

ment shall be levied while any portion exceeding twenty-five per cent. of any previous assessment shall remain unpaid or uncollected, except in cases (a) where all the powers vested in the company by this Act for the purpose of collecting such previous assessments, shall have been exhausted; or (b) where the collection of a previous assessment upon one or more stockholders shall have been restrained by injunction or otherwise.

(1) The trustees of any company incorporated or registered under this Act may, with the consent of its shareholders representing at least two-thirds in value of the capital stock of the company actually paid in, levy an assessment not exceeding twenty-five per cent. of the amount of capital stock of the company actually subscribed but not previously called up at the time of such consent being given, and any assessment so levied shall be subject, except as to amount, to all the provisions of this Act relating to the levying and collecting of assessments.

Concurrence of Board to Levy.—Sec. 32.—No assessment shall be levied except by order of the board of trustees, concurred in by a majority of said board, and entered upon the records of the corporation, and notice thereof may be, in a manner, prescribed by the by-laws of the company.

SEC. 46.—Companies organized under the Companies' Act, as incorporated in 1888, may become incorporated under this Act.

SEC. 47.—Companies incorporated under any Act of the Province or late Colonies may receive from Registrar a certificate of registration under this Act.

Schedule of Fees, under this Act.

Filing certificate.....	\$20.00
Publication in B. C. Gazette.....	5.00
Every search.....	.50

As already stated (*page*) the Companies' Act of 1878, in the Consolidated Acts of 1888, chapter 21, appears to be still in force, and, for the purpose of reference, a brief abstract is given:—

Sec. 2.—**The Imperial Act, "The Companies' Act, 1862,"** has, as far as practicable, and save as altered and modified by Provincial Statutes, the force of law in the Province.

Purposes.—Sec. 12.—Corporations for any lawful purposes may be formed if the purpose comes within the class of subjects in respect of which the Legislature of the Province has the power of legislation.

Mode of Incorporation—Sec. 13.—Similar to Sec. 3 of the "Companies' Act of 1890." (*See page*).

Powers of Corporations.—Sec. 16.—Similar to Sec. 5 of the "Companies' Act of 1890." (*See page*).

Borrowing Powers.—Sec. 17.—Similar to Sec. 8 of the "Companies' Act of 1890." (*See page*).

Number of Trustees.—Sec. 21.—Similar to Sec. 11 of the "Companies' Act of 1890." (*See page*).

Debts not to Exceed Assets.—Sec. 26.—If the debts of the corporation exceed the amount of the capital stock paid in the trustees shall, in their individual and private capacity, be liable, jointly and severally, for the same to the corporation.

Assessments.—Sec. 37.—The trustees have power to levy and collect, for the purpose of paying the proper and legal expenses of the corporation, assessments upon the capital stock thereof.

Total Assessments.—Sec. 38.—The total amount of assessments levied upon each share shall not exceed in the aggregate the par or face value of each share issued.

Limit of Assessments.—Sec. 39.—No one assessment shall exceed 5 per cent. of the stated amount of the capital stock of the corporation named in the articles of incorporation.

Table of Fees Payable under the Foregoing Sections :

Filing certificate	\$20.00
Publication in the B. C. <i>Gazette</i>	5.00
Every search .....	.50

FOREIGN COMPANIES.

SEC. 65.—Any company having seven or more members incorporated in any foreign state may register itself and the members thereof in B. C. as a company formed on the principle of having no limit placed on the liability of its members, subject to the proviso: That no company shall be so registered unless an assent to its being so registered has been given by three-fourths in number and value of its shareholders at some general meeting summoned for that purpose, nor until a copy of the resolution giving the assent, together with the memorandum of association and a copy of the Act or charter of incorporation, or of the articles of association or deed of settlement shall have been deposited with the Registrar of Joint Stock Companies of B. C.

SEC. 66.—The memorandum of association shall have the corporate seal of the company affixed thereto, and shall contain the following things:—

- (1) The name of the company, with the addition of the word "foreign" at the end thereof, which word shall thenceforth form part of such name.
- (2) The name of the foreign state in which the company was incorporated, and the place in such foreign state in which the head office is situated.
- (3) The objects for which the company has been established.
- (4) The amount of the capital of the company, and the number of shares into which it is divided and the amount of each share.
- (5) The name, address and addition of each shareholder, and the number of shares held by him.

SEC. 72. Any company or association which has been, or shall hereafter be, incorporated in any foreign state or country for the purpose of carrying on any business that has for its object the acquisition of gain, and permitted by its charter and Act of incorporation and articles of association to operate in B. C., may register itself and the members thereof under this Act by depositing for registration with the Registrar of Joint Stock Companies of this Province a copy of its Act, certificate and charter of incorporation and articles of association, certified as being a true copy of the same, under the hand of the officer of such foreign country with whom the same is registered and deposited, and having his official seal (if any) attached thereto, and also the written petition of the president and secretary of the said company, signed by them as such, and having attached thereto the corporate seal of the said company,

and acknowledged by such president and secretary before a notary public of such foreign country, praying for registration of the said company under this Act; and thereupon the said Registrar shall issue his certificate of registration, and thenceforth the said foreign company shall be known in this Province by its corporate name, with the addition thereto of the word "foreign."

SEC. 74. Any such foreign company may sue and be sued in its corporate name, and, if authorized so to do by its Act, charter, certificate of incorporation, or memorandum of association, may acquire and hold lands in British Columbia by gift, purchase, or as mortgagee or otherwise, as fully and freely as private individuals, and may sell, lease, mortgage or otherwise alienate the same, and may locate, procure, hold, buy, sell, and operate mineral claims pursuant to the provisions of the "Mineral Act" or any amendments thereto that may hereafter be made, and may carry on the business of milling, smelting, reducing and working its ores, or of obtaining from ores all that they may contain by means of any process, and of purchasing ores for that purpose, and generally have all the rights, powers and privileges of a company incorporated under the laws of the Province of British Columbia, not inconsistent with its Act, charter, certificate of incorporation, or memorandum of association.

SEC. 79. Every foreign mining company thus registered shall take out annually a miner's license in the following form; but a company thus registered, its members or shareholders shall not be entitled to take out a free miner's certificate, as provided by the "Mineral Act," for the purposes of the company:—

MINER'S LICENSE,

Not transferable.

This is to certify that the _____ company has paid me the sum of \$5, as a foreign mining company registered under Part IV. of the "Companies' Act," 1888, chap. 12, sec. 8.

SEC. 80. The fees payable under this part of this Act to the Consolidated Revenue Fund of the Province shall be as follows:—

For registering copy of Act, certificate or charter of incorporation, and articles of association, and issuing certificate...	\$50
For registering company's office and name, and address of its agent or manager.....	10
For every miner's license.....	5

THE MINERAL ACT (Consol. Stat., 1888, Cap. 82.)

SEC. 111 makes provision for the formation of mining partnerships where no articles of copartnership exist, but such mining partnerships, unless otherwise agreed upon, are deemed to be yearly partnerships.

SEC. 121. Any mining company, composed of two or more free miners, may limit the liability of its members upon complying with the requirements following, that is to say:—

Upon filing with the Gold Commissioner or Mining Recorder of the district a declaratory statement, containing the name of the company, the location and size of the claim, and the particular interest of each member of the company; and also placing upon a conspicuous part of the claim, in large letters, the name of the company, followed by the word "registered." After such conditions shall have been complied with, no member of such company shall be liable for any indebtedness accruing thereafter beyond an amount proportioned to his interest in the company.

Analytical : and : Assay : Laboratories

— OF —

Dr. GIDEON E. MOORE,
Analytical and Consulting Chemist and Assayer,

221 PEARL STREET, S.-W. COR. PLATT,
NEW YORK.


Analyses and Assays of Ores, Minerals and Metals.
Analyses of Fertilizers, Chemicals, Drugs, Waters,
Food-products, Beverages, and, in short, of
Natural and Technical Products of every
description. Detailed Printed Price-
Lists on Application.


SPECIAL ARRANGEMENTS FOR ANALYTICAL WORK, &c., ON CONTRACT BY
THE YEAR OR OTHERWISE.

Reports by Telegraph when desired.

ENGINES and BOILERS

— FOR —

Mines, Marine, 

 **Quarries, Contractors**

— AND EVERY USE. —

W. C. WHITE,

ENGINEER AND BOILER MAKER,

46 BRENNAN STREET, - - - MONTREAL, QUE.

LICENSES

—TO—

PROSPECT OR WORK MINERALS

On any of their Lands and Reservations, covering
nearly a

Quarter of a Million Acres

In Eastern Ontario and principally within the belts
containing

**Iron, Phosphate, Gold, Galena,
Plumbago, Mica, Marbles,
Building Stone,**

AND OTHER VALUABLE MINERALS,
ARE ISSUED BY

THE CANADA CO.

For list of lands and terms apply to the Company's Mining Inspectors :

H. T. STRICKLAND, Peterborough, Ont.

For lands in the County of Hastings and westward ; and
ANDREW BELL, P.L.S., Almonte, Ont.,

For lands East of the County of Hastings.

Dynamos, Electric Machines and Lamps.



Arc and Incandescent for
Mining Purposes.

Alex. Fleck, Junr.

Manufacturer of every description of

Mill and Mining Machinery

WATER WHEELS,

Steam Engines, Boilers, Derricks, Steam
Pumps, etc.

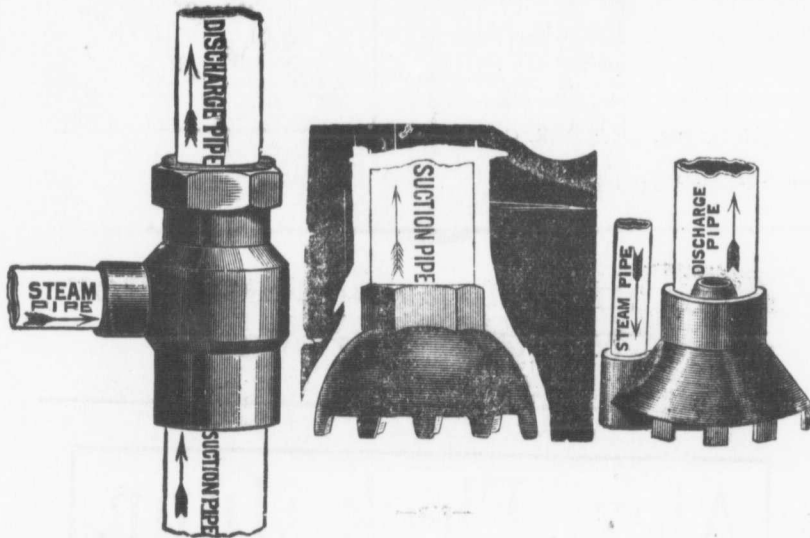
Brass and Iron Castings of every description.

Vulcan Iron Works

Wellington Street, Ottawa.

Dominion Metal Works.

VAN DUZEN'S PATENT STEAM JET PUMP.



Lift and Force Pump

This Pump can pump Hot or Cold, Sandy or Impure Water or Liquids.

CLASSIFIED USES FOR

Railroads, Mines, Quarries, Gas Works, Tanneries, Paper Mills, Chemical Works, Woollen & Cotton Mills, Soap, Oil and Candle Works, Brick and Tile Works, Breweries, Distilleries, etc., Sugar Works, Refineries, etc. Creameries and Cheese Factories, on Steamboats, Irrigating and Draining, Road Engines and Threshing Machines, Public and Private Institutions.

SEND FOR ILLUSTRATED CATALOGUES.

Garth & Co., 536 to 542 Craig St. Montreal.

AGENTS AND MANAGERS FOR THE DOMINION,

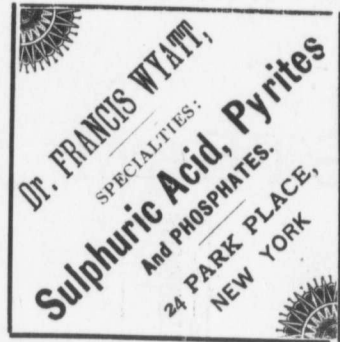
McINTYRE & CODE,
Barristers, Solicitors,
 & C.

Special attention given to the
 Incorporation of Mining Companies.
 Under the Provincial and Dominion Joint
 Stock Companies Act.

SOLICITORS FOR BANK OF MONTREAL.

A. F. McINTYRE, Q.C. R. G. Code.

Ottawa, Canada.



JOHN A. ROEBLING'S SONS CO.
WIRE ROPE

—FOR—

Mines, Elevators, Inclines, &c.

**GALVANIZED GUY ROPE. BRIDGE CABLES.
 HAWSER ROPES.**

WIRE of all kinds. Insulated WIRES

John A. Roebling's Sons Co.

117 & 119 LIBERTY St., NEW YORK

H. L SHIPPY Sec'y



MILITARY & CIVIL

Business Supplies

Department of Marine Supplies

OTTAWA, CANADA



Mines, Elevators, Inclines, Etc.

GALVANIZED GUY ROPE BRIDGE CABLES
HAWSER ROPES

WIRES of all kinds. Insulated WIRES

John A. Roebbling's Sons Co.

117 & 119 LIBERTY ST., NEW YORK

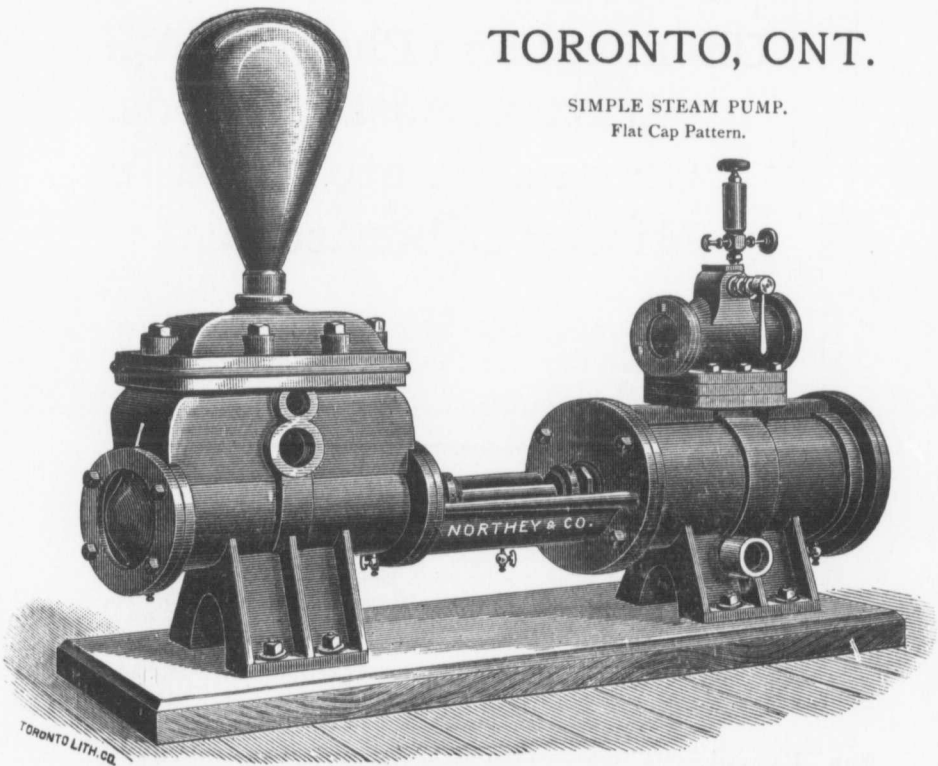
H. J. SHEPHERD

THE CANADIAN MINING MANUAL.

NORTHEY & CO'S Steam Pump Works,

TORONTO, ONT.

SIMPLE STEAM PUMP.
Flat Cap Pattern.



Steam Pumps of the Best and Latest Designs for Mining
Purposes, Boiler Feeding, Fire Protection,
and General Water Supplies, &c.

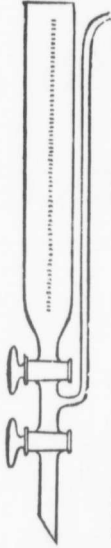
NORTHEY & CO.,
Mechanical and Hydraulic Engineers,
TORONTO, ONT.

WORKS :—Corner Front and Parliament Streets.

EIMER & AMEND,

205--211 THIRD AVE., New York.

Manufacturers and Importers of all kinds of
Chemical and Physical Apparatus, Assay Goods, Chemicals, etc., used in Mining Laboratories.



Specialties.—Strictly c.p. Acids, c.p. Chemicals, Collection of Metals, Minerals, Rock Crystals, Models, etc.

DIAMOND ROCK DRILLS.

For Prospecting Mineral Veins and Deposits, Boring Vertically, Horizontally or at any angle, to any desired depth, taking out a Cylindrical Section or Core the entire distance, showing exact character, and giving a perfect section of the strata penetrated. Also for Boring Artesian Wells perfectly straight, round and true.

Machines for channelling, gadding and all kinds of Quarry Work, Shaft Sinking, Tunnelling, Mining, Railroad and all classes of rock boring.

The "Diamond Drill" received the highest award at the CENTENNIAL EXHIBITION for "Originality of Method; Simplicity in its Construction; Convenience in its Application; Value of Results Obtained; Cheapness and Remarkable Speed."

It has also received the highest awards at the AMERICAN INSTITUTE FAIR, New York and the FRANKLIN INSTITUTE FAIR, of Philadelphia, Pa.

MANUFACTURED BY

THE AMERICAN DIAMOND ROCK BORING CO

No. 15 Cortland Street, Room 24, New York.

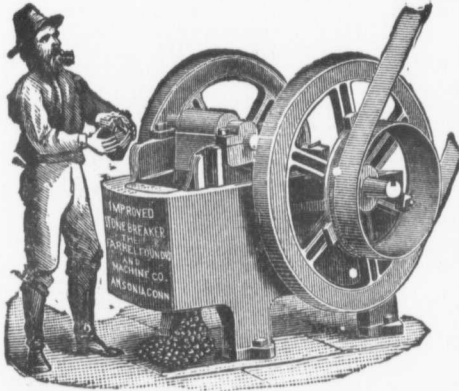
P.O. Box 1442.

SEND FOR CATALOGUES AND PRICE LIST.

Rock Breakers and Ore Crushers

"THE BLAKE STYLE."

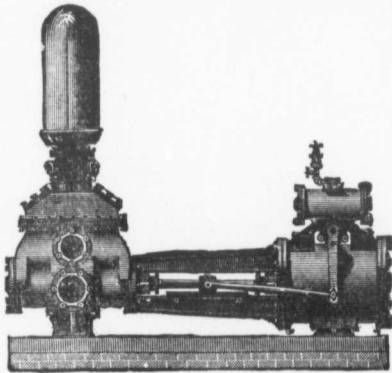
This Style of Rock Breaker, after 20 years' practical test, has proved to be the best ever designed for the purpose of breaking



Quartz, Emery, Gold and Silver Ores, and all Hard or Brittle Substances; also for making Railroad Ballast and Concrete. Our Adjustable Toggle Block enables us to adjust the Machine while in motion to the size of any stone or particular product. There are other improvements possessed by these Machines not equalled by any other in the world. Gold Medal awarded at the Massachusetts Mechanics' Association 1881, and Silver Medal (Special) at American Institute, N. Y., 1882.

FARREL FOUNDRY & MACHINE CO., Ansonia, Conn., U.S.A.

THE DAVIDSON DIRECT ACTION STEAM PUMPS.



WARRANTED

THE BEST MADE

FOR ALL SITUATIONS.

As a Mining Pump it's

UNEQUALLED

By any in the Market.

MANUFACTURED BY

M. T. DAVIDSON,

43 to 53 Keap Street, - - BROOKLYN, N.Y., U.S.A.

BRANCH OFFICES :—77 Liberty St., New York,
51 Oliver St., Boston, U.S.A.