

John 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 specialty.

TO USERS OF THE DIAMOND DRILL.

Diamond Drill Bits set Promptly by an Efficient Man All Work Guaranteed.

Bort and Carbon Diamonds for sale. Same terms as New York. Prospecting with American Diamond Drill at per foot or by the day.

McRae & Co.,
OTTAWA.

J. T. DONALD,

Assayer and Mining Geologist,

156 St. James Street, Montreal.

Analyses and Assays of Ores, Fuels, Furnace Products, Waters, etc. Mines and Mining Properties Examined and Valued.

**SPECIALISTS IN MICA,
MINERS' AGENTS,
RICHARD BAKER SON & CO.**

19 St. Duustan's Hill, LONDON, ENG.

R. C. CAMPBELL-JOHNSTON

(of Swansea, India, and the United States.)

**METALLURGIST, ASSAYER,
AND MINING ENGINEER.**

Properties reported on. All assays undertaken. Furnaces and concentrating plants planned and erected. Treatment for ores given. Ores bought and sold. Box 40, Vancouver, B.C.

**T. D. LEDYARD,
DEALER IN MINES, &c.**

57 COLBORNE STREET, TORONTO.

Specialties:

BESSEMER IRON ORES PARTICULARLY LOW IN PHOSPHORUS
ASBESTOS.

**F. CIRKEL,
MINING : ENGINEER.**

(Graduate, Academy of Mines, Axchen, Germany.)

Reports on Mica Deposits, Asbestos, Phosphate

78 QUEEN STREET,
OTTAWA.

**E. E. BURLINGAME'S
ASSAY OFFICE AND LABORATORY**

Established in Colorado, 1866. Samples by mail or express will receive prompt and careful attention. Gold & Silver Bullion Refined, Melted and Assayed, or Purchased.
Address, 1736 & 1738 Lawrence St., Denver, Colo.

J. LAINSON WILLS, F. C. S.

MEMBER INSTITUTION MINING AND METALLURGY
LONDON, ENGLAND.

12 Old Slip, New York.

INVESTIGATION OF MINING PROPERTIES
ANALYSES, ASSAYS, &c.

C. V. M. TEMPLE

(Formerly President Megantic Mining Co., P.Q.)

MINES AND MINING LOCATIONS FOR SALE.

CORRESPONDENCE SOLICITED.

Office and Residence:

47 ST. GEORGE ST., TORONTO, ONT.

CANADIAN REPRESENTATIVE:

HENRY DE Q. SEWELL, Dominion and Ontario Land Surveyor,
Mining Engineer, etc., Port Arthur, Ont., A. M. Inst. C.E.

LONDON REPRESENTATIVES:

LANE GAGGÉ & ANDREWS, Solicitors, Arundel St. Strand, London.

R. C. CAMPBELL-JOHNSTON, (of Swansea, India and the States), Metallurgist, Mining Engineer, Vancouver, B.C.

Crabb's Patent Clip

FOR

Endless Rope Haulage

The latest and most efficient Clip in the market; does not damage the rope; cheap, simple and substantial in construction, and certain in action on rising and falling gradients; automatically attaching and detaching itself at Crosses, Junctions and Terminals; drags the tub or wagon on the centre line; requires no adjusting, it being always in position to receive the rope; can be adapted either to the top, bottom or side of the tub. A sample one forwarded for one month's trial, purchase or return, to any Colliery in the United Kingdom, carriage paid. Further particulars and testimonials may be had on application to

G. H. CRABB,

Bunker Hill, Fence Houses,

DURHAM, ENG.

LEDOUX & COMPANY,

9 Cliff St., New York.

**Engineers, Metallurgists &
Assayers.**

Public Ore Sampling and Storage Works

All the principal buyers of furnace materials in the world purchase and pay cash against our certificates of assay, through New York banks.

By special permission of the Secretary of the Treasury of the United States, cars of ore or Copper matte passing through in bond can be opened and sampled at our works.

Consignments received and sold to highest bidder. Send for circular giving full particulars.

Mines examined and sampled. Assays and Analyses of all kinds.

WYATT & SAARBACH,

Consulting, Analytical and Technical Chemists

12 OLD SLIP, NEW YORK.

(Near Hanover Square.)



VANDUZEN STEAM PUMP
THE BEST IN THE WORLD.
Pumps Any Kind of Liquid.
Always in Order, never Clogs nor freezes. Every Pump Guaranteed.
10 SIZES.
200 to 12000 Gallons per Hour.
Cost \$7 to \$75 each. Address
GARTH & CO.,
536 to 542 Craig St. MONTREAL

EBEN E. OLCOTT,

Consulting Mining Engineer & Metallurgist.

18 Broadway, New York City.

Cable Address: - - - "Kramolena."

Mines examined and reported on. Will act as permanent special advising engineer, of mining companies.
Special facilities for making working tests on ores)

WM. HAMILTON MERRITT, F.C.S.

Associate Royal School of Mines, &c.,

MINING ENGINEER and METALLURGIST,

Will report on Mines and Mineral Properties

ADDRESS:

15 Toronto St., Toronto, Ont.

F. H. MASON, F.C.S.

Member of the American Institute of Mining Engineers
Member of the Society of Arts, Crafts and Industries, London
Member of the Mining Society of Nova Scotia.

**CONSULTING METALLURGIST,
CHEMIST AND ASSAYER.**

Mines and Mineral Lands Sampled, and Assays made. The treatment of Refractory Gold Ores and Concentrates, a specialty.

QUEEN'S BUILDING,

HOLLIS STREET, - - HALIFAX, N.S.

R. T. Hopper & Co.,

MINERS AND SHIPPERS OF
MINERALS.

BOARD OF TRADE BUILDING,

MONTREAL, CAN.

Asbestos, crude and manufactured. Phosphate, Mica, Plumbago, Soapstone, &c.

MICHIGAN MINING SCHOOL

A State School of Mining Engineering, located in the heart of the Lake Superior mining region, giving practical instruction in Drawing, Blue-printing, Mechanics, Mechanism, Properties of Materials, Graphical Statics, Mechanical and Electrical Engineering, Shop-practice, Analytical and Technical Chemistry, Assaying, Ore Dressing, Metallurgy, Plane, Railroad and Mine Surveying, Hydraulics, Mining, Mineralogy, Petrography, General, Economic, and Field Geology, etc. Has Summer Schools in Surveying, Shop-practice, and Field Geology. Laboratories, Shops and Stamp Mill well equipped. Tuition free. For Catalogues apply to the Director Houghton, Mich.

ROBIN & SADLER

MANUFACTURERS OF
Leather Belting
SPECIALTIES
DYNAMO BELTS
WATERPROOF BELTING
MONTREAL TORONTO
2518 & 2520 NOTRE DAME ST. 129 BAY ST.

W. PELLEW-HARVEY, F.C.S.

Mining, Analytical & Assay Work undertaken

Information concerning the Mining Industry and Mines of British Columbia given.

ASSAY AND MINING OFFICES: VANCOUVER, B.C.

**ORFORD COPPER CO.,
Copper Smelters**

Works at Constable's Hook, N.J., opposite New Brighton, Staten Ore. Copper 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, ROBERT M. THOMPSON,

Treasurer G. A. LAND.

Office 37 to 39 Wall Street, New York.